

**ANNUAL REPORT  
VITAL STATISTICS OF MASSACHUSETTS  
PUBLIC DOCUMENT #1  
2006**

THE COMMONWEALTH OF MASSACHUSETTS  
DEPARTMENT OF PUBLIC HEALTH

DEVAL L. PATRICK, GOVERNOR  
JOHN W. POLANOWICZ, SECRETARY OF HEALTH AND HUMAN SERVICES  
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150 MOUNT VERNON STREET, 1<sup>ST</sup> FLOOR  
DORCHESTER, MASSACHUSETTS 02125-3105

NOVEMBER 2013

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**NOVEMBER 2013**

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State House, Boston**







# The Commonwealth of Massachusetts

Executive Office of Health and Human Services

Department of Public Health

Registry of Vital Records and Statistics

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November, 2013

To the Honorable Senate and  
House of Representatives:

We have the honor to submit, as required by Chapter 111, Section 2 of the General Laws, the one hundred sixty-fifth annual report on statistics of births, deaths, marriages, and divorces in Massachusetts for calendar year 2006.

Since 1964, the ANNUAL REPORT OF VITAL STATISTICS has been published by the Department of Public Health and is intended to assist in the development of policy and programmatic initiatives within the Department, as well as to provide State officials and agencies, and the general public, with valuable statistical information.

Sincerely,

A handwritten signature in black ink, appearing to read "Gerald F. O'Keefe".

GERALD F. O'KEEFE  
Registrar



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## ACKNOWLEDGEMENTS

This publication of the 2006 ANNUAL REPORT OF VITAL STATISTICS is the result of the combined efforts of all data providers, including the 351 city and town clerks, hospital personnel, physicians, funeral directors, probate courts, clinics, and Department of Public Health personnel. We gratefully acknowledge the assistance provided by all data providers, without whose efforts there would be no vital statistics.

Department of Public Health staff most significantly involved in the production of the 2006 ANNUAL REPORT OF VITAL STATISTICS include:

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Bruce Cohen, Malena Hood, James West, and Dana Bernson, Bureau for Health Information, Statistics, Research, and Evaluation: provided technical assistance and data, including the previously published:

Massachusetts Births 2006: Figures B-4, B-5, B-6, B-7, B-8, B-9, B-10, B-11 and D-3; as well as, Tables B-4, B-5A, B-5B, B-6A, B-6B, B-7, B-8, B-9, B-10, B-11, B-12, B-13, B-14, B-15, B-16, B-17, B-18, B-19, B-20, B-21, B-22, B-23, B-24, B-25, B-26A, B-26B, B-26C and D-2.

Massachusetts Deaths 2006: Figures C-1, C-2, C-3, C-4, C-5, C-6, C-7, C-8 and F-4; as well as, Tables C-4, C-5, C-6, C-7, C-8A, C-8B, C-9, C-10A, C-10B, C-11, C-12, C-13, C-14, C-15, C-16, C-17, C-18, C-19, C-20, C-21, C-22, C-23, C-24, C-25, C-26, C-27, C-28, C-29, C-30, C-31, C-33A, C-33B, C-33C D-1, D-3, D-4, and F-1.

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Pedro Fidalgo, Operations Unit Supervisor, who is responsible for all printing and mailing of forms;

Alex Forman, Registration Unit Director, who is responsible for coordination with cities and towns, funeral directors, courts, and the overall registration and amendment process;

June Deloney, Registration Unit Supervisor, who is responsible for coordinating timely and accurate document processing.

The 2006 ANNUAL REPORT OF VITAL STATISTICS has been compiled and produced under the general supervision and direction of:

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<http://www.mass.gov/dph>

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## INTRODUCTION

The ANNUAL REPORT OF VITAL STATISTICS (Public Document No. 1) has been published continuously since 1842. This is the 43rd edition produced by the Department of Public Health. This report, required under the provisions of Chapter 111, section 2, of the Massachusetts General Laws, tabulates data on Massachusetts births, fetal deaths, deaths, marriages, divorces, and population for calendar year 2006. The report provides its users with an overview of the health status of the Massachusetts population.

Vital statistics data may be tabulated either in terms of resident data or occurrence data. Resident data include all events which occur to residents of the Commonwealth, wherever the events occur. Occurrence data include all those events which occur within the state, including those which occur to out-of-state residents. There is an interstate exchange of copies of birth and death records among the fifty states, the District of Columbia, Puerto Rico, the U.S. Virgin Islands, Guam, and all Canadian provinces. These records are exchanged for statistical purposes only, for events which occur in states or provinces other than where the individual resides. This exchange allows each of the states and provinces to track the births and deaths of its residents. The majority of the data presented in this report for births and deaths is based on resident data. Marriage, divorce, and fetal death data however, only reflect events that occurred within the Commonwealth.

## REGISTRATION

The first government-operated system of vital events registration anywhere in the world began in the Commonwealth of Massachusetts in 1639 under colonial administration. Prior to that time, in countries with a vital registration system such as England, the responsibility for the registration of vital events had been placed on church officials. The Massachusetts system mandated the registration of vital events by the clerks of the communities. In 1842, the Massachusetts legislature established the first statewide coordination for the registration of these events by requiring that copies of the events registered in the local cities and towns be sent to the Secretary of State. The first year of collection was designated for 1841. The collection of data and the production of the ANNUAL REPORT OF VITAL STATISTICS has continued since then. With the exception of the administrative location of the State Registry, the actual mechanics of the system have changed remarkably little over the years.

With limited exceptions, most vital records in Massachusetts are open records. For open birth and death records, there is a triple registration process in Massachusetts. The event is first recorded in the city or town where the event occurred. Originally, the clerk would send a copy of the event to the State Registry. Since 2000, the clerk of that community has been required to forward the original record to the State Registry and a certified copy to the community where the person resided at the time of the event. Certified copies of the records may be issued from local or state registries. If the record is a restricted birth record, such as those of out-of-wedlock births, the registration occurs only in the community where the event occurred and in the state office, unless the mother gives permission for the resident community to receive a copy.

In addition to receiving a legal copy of each birth record from the city or town in which the birth occurred, the State Registry also receives information about the birth record directly from the hospital or birthing center where the birth occurred. These data include confidential medical information in addition to the legal information. This medical information is processed to produce the statistical information on births contained in this report.

Since 1986, the State Registry has utilized a program of direct electronic transmission of birth records from hospitals. The system used in Massachusetts is called the Electronic Birth Certificate (EBC). Most birth records are now received through this method. EBC has contributed to reducing processing time at both the hospital and the State Registry, while the system's built-in edits increase the quality of the data.

The process for creating death certificates is the most complex of all vital records. Complete and accurate death records are dependent upon the following individuals: 1. Certifier, who not only initiates the death registration process but also determines the cause of death as well as the place, time, and date of death; 2. Funeral Director, who plays the role of facilitator in the death registration process and adds the personal data concerning the decedent, which are supplied by an informant; 3. Burial Agent, who both issues the permit that allows the chosen disposition to take place and serves as the initial acceptor of the death certificate for official registration; and 4. City or Town Clerk, who records the death certificate, issues certified copies and forwards the original death record to the Registry of Vital Records and Statistics and other communities as required by law.

Beginning in 1999, the International Classification of Diseases-Tenth Revision (ICD-10) replaced the ninth revision as a means of classifying cause of death. The ICD-10, developed by the World Health Organization, is an international classification system employed by the United States in order to promote international comparability in collecting, classifying, and tabulating mortality statistics.

The Registry of Vital Records and Statistics directly receives the fetal death reports for fetuses of either twenty or more weeks gestation or weighing at least 350 grams from hospitals or physicians. There are no local filings of fetal death reports.

Marriage licenses may be issued from any of the 351 cities or towns regardless of where the marriage is to take place. The community issuing the license is required to submit an attested copy of the marriage record to the State Registry. For the 2006 marriage records, the event is recorded only in the community where the notice of intention to marry was filed and at the State Registry.

Abstracts of divorces granted are also sent directly to the State Registry from the Registers of Probate from each county probate court.

#### STATISTICAL PROCESSING AND TABULATING

The records received in the State Registry are carefully examined for legal errors and inconsistencies. As part of the computerization process, errors and inconsistencies are queried and corrected. A computerized hospital query program is part of the EBC program. The Registry also has a data quality assurance program that includes on-site



instruction for clerks and hospital personnel who have reporting difficulties, and training for all groups involved in the data collection process.

Annually, when registration is considered as complete as possible, statistics are aggregated for presentation in this report, in special studies, and for program monitoring and surveillance.

Anyone using statistical information for comparisons over time should be aware of inconsistencies and changing conventions for classification and coding. This is particularly important when using cause of death information. Codes used for classifying cause of death in this report are based on the Tenth Revision of the International Classification of Diseases, World Health Organization. Classification of variables such as race, nativity, and marital status may also differ over time.

It is hoped that this report will be useful to a wide range of health data users in the Commonwealth, as well as to educational planners, demographers, and historians. Questions concerning these data and requests for more detailed findings should be directed to:

Massachusetts Department of Public Health  
Registry of Vital Records and Statistics  
150 Mount Vernon Street  
Dorchester, Massachusetts 02125  
(617) 740-2670



## VITAL EVENTS





## SECTION A

### VITAL EVENTS

#### HIGHLIGHTS

##### BIRTHS

- In 2006, there were 77,670 births to Massachusetts residents.
- Births increased by 1.1% from 2005 to 2006.
- The 2006 Massachusetts crude birth rate per 1,000 residents was 12.1, an increase of 1.7% from the birth rate of 11.9 in 2005 per 1,000 residents.
- Massachusetts' 2006 birth rate of 12.1 per 1,000 residents was lower than the 2006 US birth rate of 14.2 per 1,000 residents.
- The most births occurred in August (9.1%--7,030 births); the fewest births occurred in February (7.5%--5,790 births).

##### DEATHS

- In 2006, 53,293 Massachusetts residents died.
- The number of resident deaths decreased by 0.9% from 2005 to 2006.
- The Massachusetts crude death rate decreased from 840.4 deaths per 100,000 residents in 2005 to 827.9 in 2006. The 2006 US crude death rate of 810.4 deaths per 100,000 residents was higher than the 2005 US crude death rate of 825.9. The 2006 age-adjusted death rate in Massachusetts (717.6 per 1,000 residents) was lower than the US age-adjusted death rate (776.5).
- The most deaths in 2006 occurred in March (9.6%--5,113); the fewest deaths occurred in June (7.5%--3,998).

##### FETAL DEATHS

- There were 388 reportable fetal deaths to Massachusetts residents in 2006.
- The number of reportable fetal deaths decreased by 33 from 2005 to 2006, resulting in a fetal death rate of 5.0 per 1,000 live births.

## INFANT DEATHS

- In 2006, 369 infant deaths (less than 1 year of age) occurred to Massachusetts residents.
- The 2006 Massachusetts infant mortality rate of 4.8 deaths per 1,000 live births was a decrease over the 2005 infant mortality rate of 5.1 deaths per 1,000 live births.
- The Black non-Hispanic infant mortality rate increased from 9.4 deaths per 1,000 live births to 11.1 deaths per 1,000 live births between 2005 and 2006.
- The Massachusetts 2006 infant mortality rate of 4.8 per 1,000 live births was 28.4% below the US infant mortality rate of 6.7.

## MARRIAGES

- In 2006, there were 37,993 marriages in Massachusetts, which includes 543 male to male and 899 female to female marriages.
- The total number of marriages in Massachusetts decreased by 3.8% from 2005 to 2006, while the number of male to female marriages decreased by 2.4%.
- The 2006 Massachusetts rate of 5.9 marriages (5.7 for heterosexual marriages) per 1,000 population was below the US marriage rate of 7.5.
- The most marriages occurred in September (13.8%--5,246); the fewest marriages occurred in January (4.0%--1,510).

## DIVORCES

- In 2006, 14,621 divorces were granted in Massachusetts.
- Divorces in Massachusetts increased by 1.9% from 2005 to 2006.
- The 2006 Massachusetts divorce rate of 2.3 divorces per 1,000 population was below the US rate of 3.7.
- The largest number of divorces was finalized in January (1,463--10.0%), and the fewest in November (1,059--7.2%).

## NATURAL INCREASE

- The rate of natural increase in the Massachusetts resident population increased from 2005 to 2006 by 5.6% to 3.8 per 1,000 population.

- The 2006 US natural increase rate of 5.7 per 1,000 population remains above that of Massachusetts.

The Vital Events section provides basic information on all vital events. In addition to the information highlighted above, this section contains summary birth and death data by city, town and county. More detailed information is contained in the sections on the individual events.

#### DEFINITIONS IMPORTANT FOR THIS SECTION INCLUDE:

##### LIVE BIRTH

A live birth is any infant who breathes or shows any other evidence of life (such as beating of the heart, pulsation of the umbilical cord, or definite movement of voluntary muscles) after separation from the mother's uterus, regardless of the duration of gestation.

##### FETAL DEATH

A fetal death is a death prior to the complete expulsion or extraction from its mother of a product of conception, irrespective of the duration of the pregnancy; the death is indicated by the fact that after such separation, the fetus does not breathe or show any other evidence of life, such as the beating of the heart, pulsation of the umbilical cord, or definite movement of the voluntary muscles.

Massachusetts law requires that fetal deaths of 20 or more weeks gestation or weighing at least 350 grams be reported; therefore, the fetal deaths referred to in this report are of that gestational age or weight.

##### INFANT DEATH

Death of a child whose age is less than one year.

##### MISER

The Massachusetts Institute for Social and Economic Research. This research institute, which was located at the University of Massachusetts in Amherst, produced the official population estimates and projections for the Commonwealth through 1999.

##### NATURAL INCREASE

The difference between the number of resident live births and the number of resident deaths.

## NEONATAL DEATH

Death of a child whose age is less than 28 days.

## OCCURRENCE

Occurrence data reflect where the event took place without regard to residence. In Massachusetts, place of event will be one of 351 cities or towns.

## RESIDENCE

The usual place of residence as reported by the mother (for births) or the informant (for deaths). An infant's residence is considered that of the mother. While occurrence data include only events that occurred within Massachusetts, residence data for births and deaths include those which may or may not have occurred in Massachusetts.

### CRUDE RATES OF VITAL EVENTS:

BIRTH RATE	$\frac{\text{No. of Resident Live Births}}{\text{Total Resident Population}} \times 1,000$
FETAL MORTALITY RATE	$\frac{\text{Number of Resident Fetal Deaths}}{\text{Resident Live Births} + \text{Resident Fetal Deaths}} \times 1,000$
INFANT MORTALITY RATE	$\frac{\text{No. of Resident Deaths <1 Year}}{\text{Resident Live Births}} \times 1,000$
NEONATAL MORTALITY RATE	$\frac{\text{No. of Resident Deaths <28 Days}}{\text{Resident Live Births}} \times 1,000$
DEATH RATE	$\frac{\text{No. of Resident Deaths}}{\text{Total Resident Population}} \times 100,000$
MARRIAGE RATE	$\frac{\text{No. of Occurrence Marriages}}{\text{Total Resident Population}} \times 1,000$
DIVORCE RATE	$\frac{\text{No. of Occurrence Divorces}}{\text{Total Resident Population}} \times 1,000$



**Table A-1**  
**SELECTED FACTS IN VITAL STATISTICS**  
**MASSACHUSETTS: 2006**

**BIRTH**

Age Range of Mothers: 12 - 54

Age Range of Fathers: 14 - 74

Sets of Twins: 1,675

Sets of Triplets: 47

Sets of Quadruplets: 1

Most Resident Births Occurred on: September 7. (288 births)

Fewest Resident Births Occurred on: December 24 (122 births)

Highest Number of Occurrence Hospital Births at: Brigham and Women's Hospital (8,418)

Lowest Number of Occurrence Hospital Births at: Nantucket Cottage Hospital (124)

**Twenty Most Popular Names for Boys**

<i>Boys' Names</i>	<i>Number</i>	<i>Boys' Names</i>	<i>Number</i>
Matthew	580	Benjamin	434
Ryan	559	Anthony	426
Michael	549	Alexander	419
Nicholas	504	Daniel	416
John	479	James	405
Andrew	470	Christopher	394
Joseph	463	Joshua	394
Jacob	458	Nathan	382
William	452	Tyler	368
Jack	436	Aidan	347

**Twenty Most Popular Names for Girls**

<i>Girls' Names</i>	<i>Number</i>	<i>Girls' Names</i>	<i>Number</i>
Ava	546	Sarah	298
Isabella	492	Hannah	288
Emma	443	Samantha	283
Sophia	429	Ella	275
Emily	426	Mia	251
Olivia	423	Elizabeth	231
Abigail	412	Ashley	220
Julia	331	Lily	212
Madison	314	Anna	203
Grace	311	Victoria	192

**DEATH**

Male Decedents 100 Years and Older: 80

Female Decedents 100 Years and Older: 513

Most Deaths Occurred on: January 14 (198 Deaths)

Fewest Deaths Occurred on: August 13 (100 Deaths)

Months Most Suicides Occurred: April and December (44 Deaths each)

Month Most Homicides Occurred: June (23 Deaths)

Month Most Motor Vehicle Deaths Occurred: October (50 Deaths)

**MARRIAGE**

Ages of Men with Female Spouses: 16-90 years (average:34.7)

Ages of Women with Male Spouses: 13-94 years (average:32.2)

Ages of Men (first marriage) w. Female Spouses: 16-88 years (average:30.5)

Ages of Women (first marriage) w. Male Spouses: 13-76 years (average:28.7)

Ages of Men w. Male Spouses: 18-87 years (average 41.4)

Ages of Women w. Female Spouses: 18-87 years (average 39.7)

Ages of Men (first marriage) w. Male Spouses: 18-87 years (average 40.2)

Ages of Women (first marriage) with Female Spouses: 18-87 years (average 37.9)

Most Popular Month for Marriages: September (5,246)

Least Popular Month for Marriages: January (1,510)

Most Marriages Occurred on: June 24 (730)

Fewest Marriages Occurred on: December 25 (6)

Greatest Age Difference When Groom Older than Bride: 57 years  
 Greatest Age Difference Between Two Men: 49 years

Greatest Age Difference When Bride Older than Groom: 40 years  
 Greatest Age Difference Between Two Women: 24 years

**DIVORCE**

Length of Marriages Involved in Divorces: < 1 Year to 65 Years of Marriage

Most Common Length of Marriage Prior to Divorce: 5 years

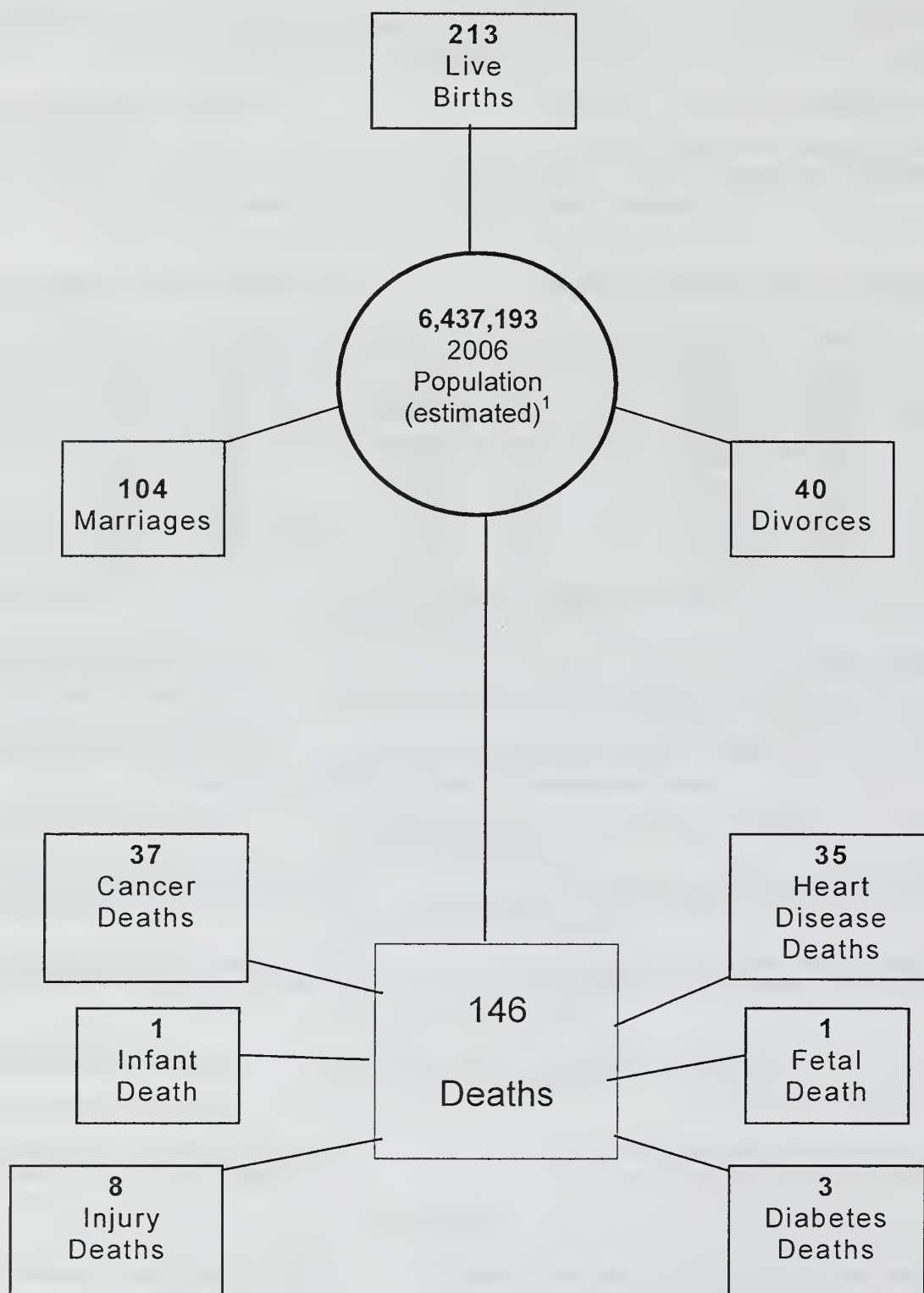
Month Most Divorces Granted: January (1,463)

Month Fewest Divorces Granted: November (1,059)

Figure A-1

## 2006 Massachusetts Daily Vital Events

Each day in 2006, Massachusetts residents had approximately:



<sup>1</sup> Massachusetts Department of Public Health estimates for 2006.

Table A-2. Number and Crude Rates of Vital Events, Massachusetts and United States: 2005-2006									
Vital Event	<u>Massachusetts</u>				<u>United States</u>				% of Rate Change
	2006	2005	Rate*	Number	2006	2005	Rate*	Number	
Births	77,670	76,824	12.1	76,824	11.9	1.7	4,265,555	4,138,349	14.0
Fetal Deaths	388	421	5.0	421	5.5	-10	25,972	25,894	6.2
Total Deaths	53,293	53,776	827.9	53,776	840.4	-1.5	2,426,264	2,448,017	825.9
Infant Deaths	369	391	4.8	391	5.1	-5.9	28,509	28,440	6.9
Neonatal Deaths	279	282	3.6	282	3.7	-2.7	19,041	18,770	4.5
Marriages	37,993	39,507	5.9	39,507	6.1	-3.3	2,193,000	2,249,000	7.6
Divorces <sup>1</sup>	14,621	14,586	2.3	14,586	2.3	0	872,000	847,000	3.6
<p>* NOTES: Neonatal and infant deaths are included in total deaths; neonatal deaths are included in infant deaths; fetal deaths are excluded from total deaths. Figures for marriages and divorces reflect occurrence, not residence.</p> <p>The rates for live births, marriages and divorces are per 1,000 population; rates for total deaths are per 100,000 population.</p> <p>Rates for infants and neonatal deaths are per 1,000 live births.</p> <p>Rates for fetal deaths are per 1,000 live births and fetal deaths.</p> <p>National numbers and rates provided by the National Center for Health Statistics.</p>									
1 U.S. Divorce rate not inclusive of California, Hawaii, Indiana, and Louisiana.									

Figure A-2A. Birth and Death Rates in Massachusetts, Selected Years: 1910-2006

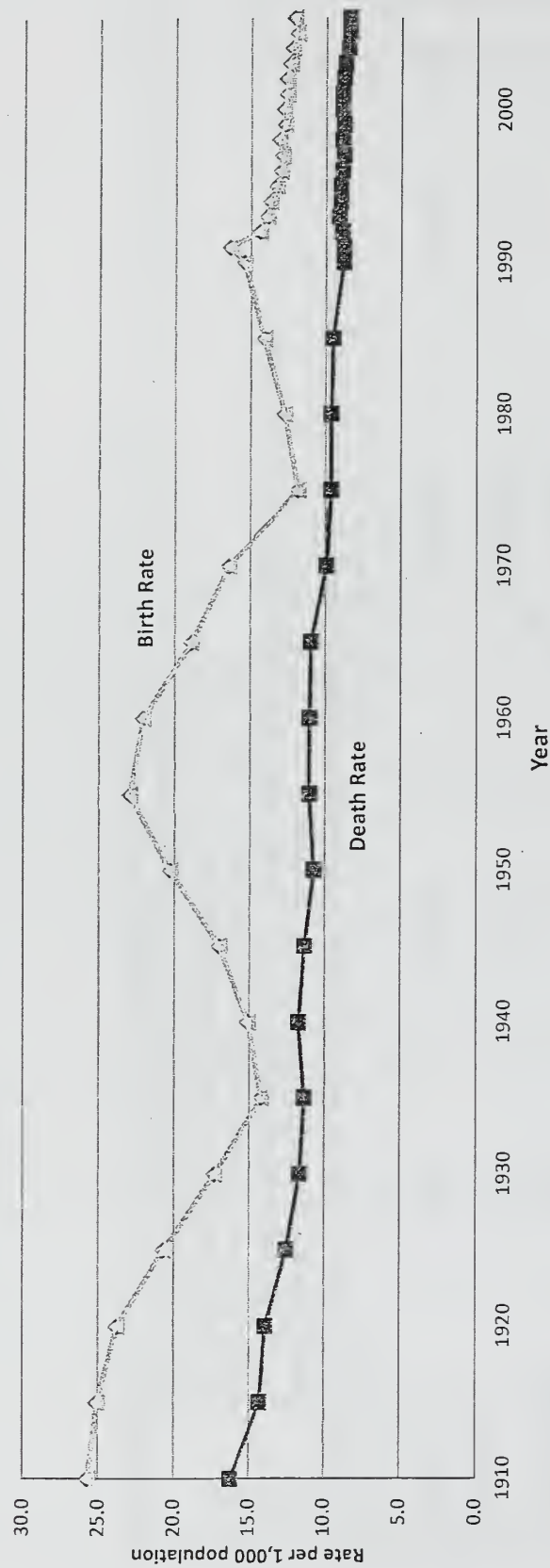
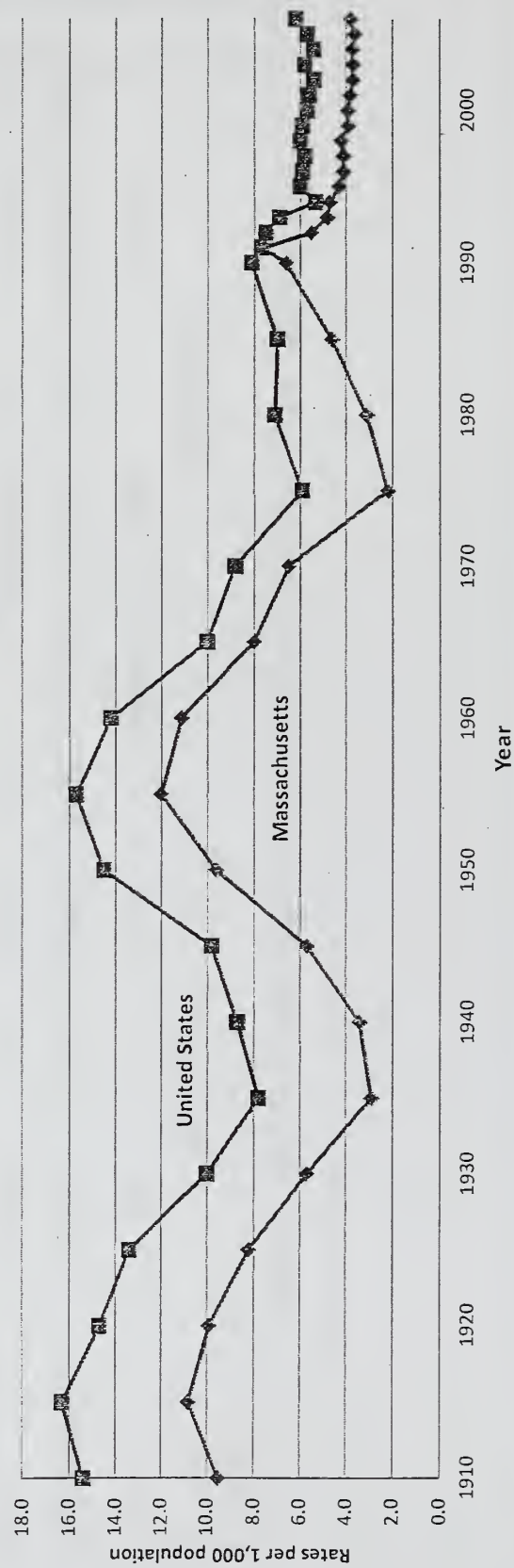


Figure A-2B. Rate of Natural Increase, Massachusetts and United States, Selected Years: 1910-2006





**Table A-3. Massachusetts Resident Births and Deaths with Resultant Natural Increase**

**Selected Years: 1900-2006**

<b>Year</b>	<b>Births</b>	<b>Deaths</b>	<b>Natural Increase</b>	<b>Rate/1,000 Residents</b>
1900	73,386	51,156	22,230	7.9
1905	75,022	50,486	24,536	8.2
1910	86,539	54,407	32,132	9.5
1915	93,155	53,131	40,024	10.8
1920	91,859	53,632	38,227	9.9
1925	86,014	51,890	34,124	8.2
1930	73,690	49,503	24,187	5.7
1935	62,416	49,634	12,782	2.9
1940	65,369	50,698	14,671	3.4
1945	76,455	50,763	25,692	5.7
1950	95,619	50,359	45,260	9.6
1955	109,610	53,386	56,224	11.6
1960	114,018	56,560	57,458	11.2
1965	100,262	58,853	41,409	7.8
1970	93,582	56,944	36,638	6.4
1975	68,070	53,708	14,362	2.5
1980	72,591	54,934	17,657	3.1
1985	81,781	55,597	26,184	4.5
1986	82,168	55,860	26,308	4.5
1987	84,345	55,562	28,783	4.9
1988	88,047	56,407	31,640	5.4
1989	91,314	53,748	37,566	6.4
1990	92,461	53,008	39,453	6.6
1991	88,176	53,010	35,166	5.8
1992	87,202	53,804	33,398	5.5
1993	84,627	55,557	29,070	4.8
1994	83,758	54,914	28,844	4.7
1995	81,562	55,296	26,266	4.3
1996	80,164	55,187	24,977	4.0
1997	80,321	54,634	25,687	4.1
1998	81,406	55,204	26,202	4.2
1999	80,866	55,763	25,103	4.0
2000	81,582	56,591	24,991	3.9
2001	81,104	56,733	24,371	3.8
2002	80,624	56,881	23,743	3.7
2003	80,167	56,194	23,973	3.7
2004	78,460	54,205	24,255	3.7
2005	76,824	53,776	23,048	3.6
2006	77,670	53,293	24,377	3.8

**Table A-4. Vital Events by Month, Massachusetts Residents: 2006**

		Births	Fetal Deaths <sup>1</sup>	Deaths <sup>2</sup>	Infant Deaths <sup>3</sup>	Neonatal Deaths <sup>3</sup>	Marriages	Divorces
<b>Totals</b>		77,670	388	53,293	369	279	37,993	14,621
<b>January</b>	#	6,271	33	4,797	41	30	1,510	1,463
	Rank	9	5	2	1	2	12	1
<b>February</b>	#	5,790	32	4,377	27	21	1,741	1,250
	Rank	12	7	7	8	8	11	3
<b>March</b>	#	6,512	33	5,113	22	15	1,792	1,212
	Rank	7	5	1	11	12	10	6
<b>April</b>	#	6,354	24	4,690	31	23	2,385	1,158
	Rank	8	11	3	5	6	7	10
<b>May</b>	#	6,787	31	4,431	31	26	3,392	1,221
	Rank	2	8	5	5	4	6	5
<b>June</b>	#	6,693	28	4,189	27	20	4,506	1,196
	Rank	4	9	10	8	9	2	8
<b>July</b>	#	6,699	25	4,365	25	16	4,342	1,070
	Rank	3	10	8	10	11	3	11
<b>August</b>	#	7,030	45	4,014	29	22	4,315	1,400
	Rank	1	1	11	7	7	4	2
<b>September</b>	#	6,631	43	3,998	21	19	5,246	1,226
	Rank	5	2	12	12	10	1	4
<b>October</b>	#	6,553	24	4,396	38	29	4,218	1,165
	Rank	6	11	6	3	3	5	9
<b>November</b>	#	6,152	35	4,287	40	34	2,275	1,059
	Rank	11	3	9	2	1	8	12
<b>December</b>	#	6,198	35	4,635	37	24	2,271	1,201
	Rank	10	3	4	4	5	9	7

<sup>1</sup>Fetal deaths are not included in Births or Deaths. <sup>2</sup>Total deaths include 1 death of unknown month of death

<sup>3</sup>Infant deaths and neonatal deaths are included in total resident deaths; neonatal deaths are included in infant deaths.

Table A-5A Vital Events by Community, Massachusetts: 2006											
Community	Population <sup>1</sup>	Live Births		Deaths		Infant Deaths <sup>2</sup>			Marriages		Resident Natural Increase
		Occurrence	Resident	Occurrence	Resident	Total	Neonatal	Licenses Issued <sup>3</sup>	Occurrence <sup>4</sup>		
STATE TOTAL	6,437,193	78,511	77,670	54,176	53,293	369	279	37,993	37,993	24,377	
Abington	16,305	1	226	64	133	1	1	74	62	93	
Acton	20,539	2	194	77	116	1	1	72	41	78	
Acushnet	10,535	0	95	22	77	0	0	50	45	18	
Adams	8,456	0	88	17	106	0	0	61	46	-18	
Agawam	28,547	0	245	421	328	0	0	198	185	-83	
Alford	400	0	2	1	3	0	0	2	2	-1	
Amesbury	16,617	0	228	89	126	2	2	108	60	102	
Amherst	34,721	6	184	81	122	0	0	148	155	62	
Andover	32,838	2	269	179	240	0	0	114	172	29	
Aquinnah (Gay Head)	362	0	5	2	4	0	0	5	25	1	
Arlington	41,273	3	568	140	389	0	0	231	136	179	
Ashburnham	5,970	1	64	9	34	0	0	18	29	30	
Ashby	2,926	0	31	7	19	0	0	6	6	12	
Ashfield	1,824	0	14	7	8	0	0	10	6	6	
Ashland	15,431	1	247	27	99	1	1	65	53	148	
Athol	11,690	2	153	147	133	0	0	56	44	20	
Attleboro	43,364	1,065	606	513	382	2	2	284	204	224	
Auburn	16,393	3	170	110	166	2	2	86	78	4	
Avon	4,345	0	48	15	43	0	0	19	31	5	
Ayer	7,212	0	93	118	62	1	1	50	27	31	
Barnstable	47,902	1,020	492	839	485	0	0	434	411	7	
Barre	5,375	0	53	8	40	1	1	28	77	13	
Becket	1,783	0	11	6	12	0	0	10	9	-1	
Bedford	12,486	0	115	154	128	0	0	66	69	-13	
Belchertown	13,897	1	160	23	74	1	1	48	53	86	
Bellingham	15,735	1	208	33	106	0	0	105	82	102	
Belmont	23,453	0	266	90	183	1	1	154	159	83	
Berkley	6,352	1	55	5	28	0	0	11	9	27	
Berlin	2,683	0	34	6	18	0	0	3	5	16	
Bernardston	2,237	1	22	0	17	0	0	11	14	5	
Beverly	39,833	2,107	399	484	393	2	2	236	260	6	
Billerica	39,812	1	447	120	236	1	1	164	114	211	
Blackstone	9,051	0	110	10	50	1	1	55	37	60	
Blandford	1,266	0	7	1	5	0	0	4	5	2	
Bolton	4,428	0	50	10	18	0	0	10	23	32	
Boston	558,435	22,015	7,912	7,257	3,864	46	35	3,554	3,956	4,048	
Bourne	19,355	0	189	158	253	1	0	80	121	-64	
Boxborough	5,032	0	48	7	18	0	0	18	16	30	
Boxford	8,162	0	60	17	50	0	0	12	5	10	
Boylston	4,253	0	60	6	25	0	0	17	57	35	
Braintree	33,658	1	409	300	336	1	0	173	106	73	

Table A-5A (continued)  
Vital Events by Community,  
Massachusetts: 2006

Community	Population <sup>1</sup>	Live Births		Deaths		Infant Deaths <sup>2</sup>		Marriages		Resident Natural Increase
		Occurrence	Resident	Occurrence	Resident	Total	Neonatal	Licenses Issued <sup>3</sup>	Occurrence <sup>4</sup>	
Brewster	10,242	0	60	187	153	0	0	88	182	-93
Bridgewater	25,769	1	234	46	143	0	0	94	76	91
Brimfield	3,627	1	37	16	42	1	1	15	15	-5
Brockton	100,366	2,258	1,538	1,253	822	12	8	694	558	716
Brookfield	3,096	0	25	11	34	0	0	17	20	-9
Brookline	56,422	1	691	226	324	0	0	405	323	367
Buckland	1,995	2	14	4	13	0	0	8	5	1
Burlington	23,265	0	265	686	177	2	2	112	103	88
Cambridge	101,529	3,305	1,145	836	549	6	5	1,135	949	596
Canton	21,481	0	204	135	200	1	1	117	83	4
Carlisle	4,823	1	30	3	16	0	0	16	30	14
Carver	11,552	0	120	32	109	1	1	54	26	11
Charlemont	1,387	0	8	6	11	0	0	5	22	-3
Charlton	12,447	2	140	66	78	1	1	52	47	62
Chatham	6,833	0	35	112	103	0	0	109	185	-68
Chelmsford	33,728	0	361	146	293	5	4	134	139	68
Chelsea	34,128	3	752	210	262	2	2	357	271	490
Cheshire	3,356	0	35	9	25	0	0	5	8	10
Chester	1,320	0	16	5	12	0	0	4	6	4
Chesterfield	1,271	0	15	3	6	0	0	6	6	9
Chicopee	54,599	1	611	251	610	1	1	308	286	1
Chilmark	944	2	12	3	9	0	0	10	53	3
Clarksburg	1,663	0	14	3	13	0	0	2	7	1
Clinton	13,997	0	198	78	115	0	0	95	79	83
Cohasset	7,219	0	74	59	61	0	0	28	147	13
Colrain	1,858	1	13	3	13	0	0	11	14	0
Concord	16,858	1,216	124	396	175	0	0	74	105	-51
Conway	1,902	0	20	0	6	0	0	0	9	14
Cummington	986	0	3	1	5	0	0	2	6	-2
Dalton	6,697	1	58	46	81	0	0	24	46	-23
Danvers	25,999	1	235	595	306	0	0	147	240	-71
Dartmouth	31,371	0	238	122	273	4	4	133	169	-35
Dedham	23,681	0	276	117	242	0	0	208	118	34
Deerfield	4,786	2	47	11	47	0	0	40	71	0
Dennis	15,914	1	109	131	202	0	0	109	167	-93
Dighton	6,648	0	65	15	48	1	0	17	25	17
Douglas	7,861	0	121	9	42	1	0	36	26	79
Dover	5,634	0	43	10	22	0	0	8	4	21
Dracut	28,805	1	375	71	219	2	1	124	92	156
Dudley	10,787	0	91	21	85	0	0	54	44	6
Dunstable	3,142	0	20	4	10	0	0	6	10	10
Duxbury	14,655	0	114	107	143	0	0	48	55	-29



Table A-5A (continued) Vital Events by Community, Massachusetts: 2006											
Community	Population <sup>1</sup>	Live Births		Deaths		Infant Deaths <sup>2</sup>			Marriages		Resident Natural Increase
		Occurrence	Resident	Occurrence	Resident	Total	Neonatal	Licenses Issued <sup>3</sup>	Occurrence <sup>4</sup>		
East Bridgewater	13,832	0	152	50	105	1	1	62	61	47	
East Brookfield	2,111	0	21	6	16	0	0	6	12	5	
East Longmeadow	14,845	0	129	231	187	1	1	78	64	-58	
Eastham	5,550	0	36	23	54	0	0	35	43	-18	
Easthampton	15,994	2	143	29	144	0	0	101	82	-1	
Eason	22,995	0	230	79	147	0	0	82	110	83	
Edgartown	3,934	0	40	12	27	0	0	108	166	13	
Egremont	1,355	0	7	3	11	0	0	6	8	-4	
Erving	1,542	0	25	4	11	0	0	5	5	14	
Essex	3,342	0	31	3	19	0	0	19	23	12	
Everett	37,100	1	640	357	330	4	3	341	266	310	
Fairhaven	16,223	0	156	137	202	0	0	98	90	-46	
Fall River	92,117	1,664	1,212	1,286	1,030	6	5	664	600	182	
Falmouth	33,620	554	271	435	393	0	0	278	461	-122	
Fitchburg	40,514	3	625	255	342	4	2	259	212	283	
Florida	666	0	14	0	7	0	0	2	4	7	
Foxborough	16,288	0	169	30	109	0	0	74	132	60	
Framingham	65,651	1,905	971	666	566	3	2	612	460	405	
Franklin	30,748	2	372	91	158	0	0	126	87	214	
Freetown	8,963	0	79	23	57	3	1	32	163	22	
Gardner	20,955	590	259	326	219	0	0	150	119	40	
Georgetown	8,023	0	81	20	54	0	0	15	42	27	
Gill	1,392	0	7	2	45	0	0	3	6	-38	
Gloucester	30,671	1	308	285	269	0	0	183	334	39	
Goshen	956	0	4	5	8	0	0	2	8	-4	
Gosnold	86	0	0	0	0	0	0	2	3	0	
Grafton	16,783	0	259	33	105	1	1	56	36	154	
Granby	6,332	0	44	10	37	0	0	18	10	7	
Granville	1,644	0	14	0	9	0	0	9	9	5	
Great Barrington	7,440	127	44	151	109	0	0	83	55	-65	
Greenfield	17,888	456	186	316	197	0	0	146	93	-11	
Groton	10,396	2	102	18	54	0	0	44	80	48	
Groveland	6,591	0	67	10	40	0	0	16	7	27	
Hadley	4,820	0	39	75	84	0	0	23	51	-45	
Halifax	7,805	0	67	13	57	1	1	25	75	10	
Hamilton	8,334	0	93	12	37	0	0	34	24	56	
Hampden	5,312	0	29	65	58	0	0	14	22	-29	
Hancock	1,018	0	13	0	2	0	0	2	8	11	
Hanover	14,077	1	150	21	95	0	0	52	44	55	
Hanson	9,915	0	92	20	59	1	1	41	48	33	
Hardwick	2,655	0	32	8	21	0	0	35	21	11	

Table A-5A (continued)  
Vital Events by Community,  
Massachusetts: 2006

Community	Population <sup>1</sup>	Live Births		Deaths		Infant Deaths <sup>2</sup>		Marriages		Resident Natural Increase
		Occurrence	Resident	Occurrence	Resident	Total	Neonatal	Licenses Issued <sup>3</sup>	Occurrence <sup>4</sup>	
Harvard	6,116	0	30	14	41	0	0	19	62	-11
Hanwich	12,673	0	100	117	195	0	0	80	191	-95
Hatfield	3,280	1	17	17	50	0	0	17	18	-33
Haverhill	60,032	8	904	560	553	6	5	342	335	351
Hawley	345	0	2	0	2	0	0	1	5	0
Heath	805	1	7	2	6	0	0	2	3	1
Hingham	21,470	1	238	160	205	0	0	81	105	33
Hinsdale	1,811	0	18	12	19	0	0	7	10	-1
Holbrook	10,765	1	134	25	99	1	1	50	29	35
Holden	16,571	0	179	56	112	2	0	67	37	67
Holland	2,529	0	19	0	12	0	0	0	3	7
Holliston	13,830	0	159	26	76	0	0	45	50	83
Holyoke	41,089	577	656	690	492	7	6	251	394	164
Hopedale	6,234	1	60	19	46	0	0	25	13	14
Hopkinton	14,048	0	172	21	63	1	0	52	44	109
Hubbardston	4,340	0	36	2	19	0	0	17	15	17
Hudson	18,847	0	229	31	106	0	0	132	127	123
Hull	11,279	1	100	31	88	1	1	55	77	12
Huntington	2,180	0	26	3	12	0	0	13	10	14
Ipswich	13,285	0	122	49	107	0	0	52	144	15
Kingston	12,435	0	135	87	127	1	1	58	77	8
Lakeville	10,618	0	134	47	67	0	0	46	29	67
Lancaster	7,069	1	73	48	49	1	1	26	13	24
Lanesborough	2,951	0	22	0	10	0	0	0	11	12
Lawrence	81,591	1,857	1,460	499	432	9	6	445	427	1,028
Lee	5,882	2	47	42	63	0	0	49	23	-16
Leicester	10,953	0	101	94	106	1	1	49	61	-5
Lenox	5,149	0	26	88	85	0	0	42	126	-59
Leominster	42,120	1,195	532	468	378	5	4	303	250	154
Leverett	1,769	1	8	3	7	0	0	5	11	1
Lexington	30,452	0	189	192	236	0	0	101	97	-47
Leyden	815	0	5	2	4	0	0	2	3	1
Lincoln	7,935	0	85	10	34	0	0	26	55	51
Littleton	8,561	0	115	65	63	0	0	24	19	52
Longmeadow	15,556	0	130	102	162	0	0	84	28	-32
Lowell	105,749	2,685	1,817	1,256	881	9	8	754	653	936
Ludlow	21,835	0	199	61	174	4	4	262	108	25
Lunenburg	10,008	0	98	31	77	0	0	44	47	21
Lynn	92,186	3	1,491	492	708	7	7	538	510	783
Lynnfield	11,540	0	79	25	81	1	1	30	39	-2
Malden	56,730	2	843	143	406	7	6	379	359	437
Manchester	5,332	0	43	10	33	0	0	41	46	10
Mansfield	22,933	0	278	31	94	0	0	81	62	184

Table A-5A (continued)  
Vital Events by Community,  
Massachusetts: 2006

Community	Population <sup>1</sup>	Live Births		Deaths		Infant Deaths <sup>2</sup>		Marriages		Resident Natural Increase
		Occurrence	Resident	Occurrence	Resident	Total	Neonatal	Licenses Issued <sup>3</sup>	Occurrence <sup>4</sup>	
Marblehead	20,285	0	192	92	137	0	0	88	100	55
Marion	5,316	1	49	50	59	0	0	19	22	-10
Marlborough	37,163	2	569	287	273	6	5	209	136	296
Marshfield	24,879	0	292	48	160	3	2	109	85	132
Mashpee	14,159	0	138	95	118	3	2	75	136	20
Mattapoisett	6,477	0	37	16	47	0	0	36	60	-10
Maynard	10,221	2	173	15	63	0	0	44	28	110
Medfield	12,328	0	116	36	67	0	0	34	8	49
Medford	53,801	4	665	531	538	4	4	339	242	127
Medway	12,780	0	143	54	77	0	0	42	30	66
Melrose	26,366	1,293	293	487	268	3	2	110	84	25
Mendon	5,743	1	54	4	26	1	1	23	32	28
Merrimac	6,350	1	59	11	42	1	1	21	7	17
Methuen	44,532	1,213	577	438	364	1	1	206	134	213
Middleborough	21,153	3	268	125	193	3	2	99	95	75
Middlefield	549	0	4	2	3	0	0	2	5	1
Middleton	9,077	0	68	12	61	0	0	21	32	7
Milford	27,523	1,021	435	386	198	2	1	141	109	237
Millbury	13,443	0	123	112	143	1	0	72	42	-20
Millis	7,949	0	100	13	53	0	0	33	64	47
Millville	2,938	0	36	6	18	0	0	12	5	18
Milton	26,243	0	296	247	221	0	0	94	122	75
Monroe	100	0	2	0	5	0	0	0	0	-3
Monson	8,744	0	67	25	67	0	0	37	23	0
Montague	8,416	6	88	40	60	0	0	37	40	28
Monterey	959	0	6	2	5	0	0	14	5	1
Montgomery	743	0	3	5	5	0	0	1	5	-2
Mt. Washington	135	0	0	0	1	0	0	5	4	-1
Nahant	3,591	0	24	28	45	0	0	20	80	-21
Nantucket	10,095	127	145	51	62	0	0	221	287	83
Natick	31,895	5	427	341	235	1	1	152	64	192
Needham	28,445	3	325	452	297	0	0	88	56	28
New Ashford	247	0	1	0	1	0	0	0	3	0
New Bedford	94,502	1,641	1,460	1,223	928	13	9	574	517	532
New Braintree	1,090	0	6	2	3	0	0	1	0	3
New Marlborough	1,522	0	11	5	12	0	0	2	36	-1
New Salem	986	0	8	3	9	0	0	6	6	-1
Newbury	6,990	1	70	13	39	1	1	31	41	31
Newburyport	17,395	771	180	328	176	0	0	161	146	4
Newtown	83,346	3,381	812	612	599	3	3	479	327	213
Norfolk	10,506	0	103	13	56	1	0	20	29	47
North Adams	14,031	325	182	235	191	0	0	76	56	-9

Table A-5A (continued)  
Vital Events by Community,  
Massachusetts: 2006

Community	Population <sup>1</sup>	Live Births		Deaths		Infant Deaths <sup>2</sup>		Marriages		Resident Natural Increase
		Occurrence	Resident	Occurrence	Resident	Total	Neonatal	Licenses Issued <sup>3</sup>	Occurrence <sup>4</sup>	
North Andover	27,137	0	297	141	219	2	1	95	138	78
North Attleboro	28,078	0	363	96	195	0	0	164	89	168
North Brookfield	4,812	0	46	5	22	0	0	25	22	24
North Reading	13,930	0	141	45	101	0	0	43	51	40
Northampton	28,803	871	219	576	286	0	0	300	258	-67
Northborough	14,652	0	136	78	104	1	1	44	45	32
Northbridge	14,184	2	221	133	129	1	1	88	48	92
Northfield	3,226	0	24	6	20	0	0	14	18	4
Norton	19,106	0	202	83	129	0	0	67	46	73
Norwell	10,382	0	104	103	79	0	0	32	40	25
Norwood	28,472	544	364	668	288	2	1	189	141	76
Oak Bluffs	3,794	156	52	70	44	0	0	43	77	8
Oakham	1,892	0	17	2	10	0	0	4	6	7
Orange	7,659	2	91	19	73	0	0	39	30	18
Orleans	6,459	0	17	50	97	0	0	74	136	-80
Otis	1,391	0	10	5	11	0	0	9	5	-1
Oxford	13,710	2	161	59	123	0	0	96	54	38
Palmer	12,895	1	124	121	139	1	0	75	59	-15
Paxton	4,556	2	57	10	27	0	0	10	18	30
Peabody	50,954	0	504	528	619	3	2	254	225	-115
Pelham	1,415	0	7	4	10	0	0	2	3	-3
Pembroke	18,069	0	213	28	90	0	0	69	45	123
Pepperell	11,386	2	118	16	63	1	1	43	42	55
Peru	836	0	8	4	5	0	0	4	3	3
Petersham	1,282	1	8	8	15	0	0	6	17	-7
Phillipston	1,753	0	19	0	6	0	0	7	7	13
Pittsfield	43,949	741	497	725	520	0	0	338	277	-23
Plainfield	600	0	6	0	8	0	0	3	9	-2
Plainville	7,994	0	119	14	62	0	0	49	30	57
Plymouth	54,781	732	729	635	463	4	1	331	404	266
Plympton	2,777	0	28	5	14	0	0	4	2	14
Princeton	3,520	1	21	7	10	0	0	14	117	11
Provincetown	3,444	0	15	27	40	0	0	249	329	-25
Quincy	90,458	1	1,161	702	875	4	3	755	649	286
Randolph	32,552	1	421	90	260	1	1	178	178	161
Raynham	13,428	1	139	79	107	0	0	52	56	32
Reading	23,161	2	255	235	189	0	0	73	36	66
Rehoboth	11,229	0	104	17	63	1	0	32	81	41
Revere	45,551	1	686	199	478	8	7	300	319	208
Richmond	1,618	0	6	3	10	0	0	4	8	-4
Rochester	5,295	0	53	13	34	0	0	19	15	19
Rockland	17,842	0	205	96	187	3	2	94	78	18
Rockport	7,761	0	45	59	85	1	1	45	77	-40



Table A-5A (continued)  
Vital Events by Community,  
Massachusetts: 2006

Community	Population <sup>1</sup>	Live Births		Deaths		Infant Deaths <sup>2</sup>		Marriages		Resident Natural Increase
		Occurrence	Resident	Occurrence	Resident	Total	Neonatal	Licenses Issued <sup>3</sup>	Occurrence <sup>4</sup>	
Rowe	350	0	4	2	5	0	0	2	1	-1
Rowley	5,832	0	64	39	44	0	0	25	21	20
Royalston	1,366	0	15	0	5	0	0	5	7	10
Russell	1,723	2	21	0	11	0	0	5	4	10
Rutland	7,406	0	101	13	33	1	1	24	18	68
Salem	41,647	1,819	523	598	336	2	2	322	277	187
Salisbury	8,264	0	64	18	70	0	0	63	56	-6
Sandisfield	830	0	3	3	3	0	0	5	2	0
Sandwich	20,707	0	192	138	162	2	0	115	189	30
Saugus	26,867	0	263	123	262	1	1	118	109	1
Savoy	724	0	4	2	3	0	0	1	1	1
Scituate	18,119	0	162	101	161	1	1	59	110	1
Seekonk	13,660	0	119	23	109	1	1	110	79	10
Sharon	17,269	0	140	66	115	0	0	65	87	25
Sheffield	3,360	0	21	9	21	0	0	31	17	0
Shelburne	2,054	0	14	18	26	0	0	8	23	-12
Sherborn	4,220	0	27	14	29	0	0	15	44	-2
Shirley	7,361	0	72	18	38	0	0	29	49	34
Shrewsbury	33,171	1	396	99	251	3	2	139	82	145
Shutesbury	1,843	1	14	5	7	0	0	6	8	7
Somerset	18,564	0	178	112	206	2	1	72	47	-28
Somerville	75,372	4	863	207	467	4	3	598	392	396
South Hadley	17,071	1	140	100	178	0	0	95	92	-38
Southampton	5,828	0	42	10	36	0	0	19	15	6
Southborough	9,511	0	120	16	42	2	2	27	33	78
Southbridge	17,503	407	265	181	159	2	2	148	107	106
Southwick	9,512	0	74	34	87	0	0	62	55	-13
Spencer	12,087	0	122	28	109	1	0	82	152	13
Springfield	156,358	5,679	2,523	1,992	1,256	23	14	859	870	1,267
Sterling	7,761	0	74	58	71	0	0	34	75	3
Stockbridge	2,256	1	16	15	28	0	0	33	49	-12
Stoneham	21,594	2	202	122	225	2	1	130	96	-23
Stoughton	26,782	2	298	316	250	0	0	171	138	48
Stow	6,159	0	81	7	29	0	0	11	48	52
Sturbridge	8,825	1	85	15	59	0	0	75	146	26
Sudbury	17,035	2	160	80	86	0	0	50	278	74
Sunderland	3,853	0	26	19	22	0	0	18	10	4
Sutton	8,974	2	96	16	54	0	0	28	49	42
Swampscott	14,283	1	139	145	163	0	0	38	41	-24
Swansea	16,243	0	131	49	154	1	0	75	84	-23
Taunton	56,348	502	784	508	516	5	4	407	325	268
Templeton	7,474	0	77	45	63	0	0	21	38	14
Tewksbury	28,990	1	313	139	227	0	0	104	105	86

Table A-5A (continued)  
Vital Events by Community,  
Massachusetts: 2006

Community	Population <sup>1</sup>	Live Births		Deaths		Infant Deaths <sup>2</sup>			Marriages		Resident Natural Increase
		Occurrence	Resident	Occurrence	Resident	Total	Neonatal	Licenses Issued <sup>3</sup>	Occurrence <sup>4</sup>		
Tisbury	3,819	0	48	20	31	0	0	50	47	17	
Tolland	446	0	1	1	4	0	0	2	2	-3	
Topsfield	6,178	0	54	58	42	0	0	11	60	12	
Townsend	9,273	1	83	28	43	0	0	49	22	40	
Truro	2,162	0	14	8	21	0	0	14	40	-7	
Tyngsborough	11,297	1	120	17	57	0	0	80	37	63	
Tyringham	352	0	2	4	7	0	0	2	17	-5	
Upton	6,374	1	81	6	41	0	0	29	16	40	
Uxbridge	12,377	0	180	49	78	0	0	72	118	102	
Wakefield	24,553	0	262	157	225	0	0	130	113	37	
Wales	1,818	0	20	8	14	0	0	8	4	6	
Walpole	23,067	0	258	89	193	1	1	90	77	65	
Waltham	59,564	0	764	228	412	5	4	401	353	352	
Ware	9,988	167	133	90	110	1	1	57	42	23	
Wareham	21,274	436	213	276	222	0	0	104	90	-9	
Warren	5,040	1	45	18	49	0	0	16	16	-4	
Warwick	763	0	6	1	7	0	0	2	1	-1	
Washington	546	0	7	0	3	0	0	0	19	4	
Watertown	32,255	1	403	107	275	0	0	221	155	128	
Wayland	13,015	0	129	104	103	0	0	31	40	26	
Webster	16,853	1	211	209	184	1	1	94	113	27	
Wellesley	26,975	1	273	99	171	0	0	107	107	102	
Wellfleet	2,821	0	12	13	31	1	1	35	71	-19	
Wendell	1,035	0	11	0	6	1	1	0	4	5	
Wenham	4,643	0	30	7	39	0	0	8	7	-9	
West Boylston	7,708	0	51	96	87	2	1	28	71	-36	
West Bridgewater	6,819	0	59	101	76	0	0	36	42	-17	
West Brookfield	3,896	0	33	76	44	0	0	18	54	-11	
West Newbury	4,301	0	39	13	27	0	0	3	6	12	
West Springfield	27,938	0	351	179	315	2	2	168	168	36	
West Stockbridge	1,450	0	9	0	5	0	0	16	14	4	
West Tisbury	2,666	2	18	8	17	0	0	22	40	1	
Westborough	18,781	1	252	153	143	0	0	91	88	109	
Westfield	40,432	2	419	369	364	1	1	242	265	55	
Westford	21,369	0	204	81	97	0	0	74	115	107	
Westhampton	1,566	0	14	2	10	0	0	1	6	4	
Westminster	7,358	0	73	16	50	0	0	29	88	23	
Weston	11,591	0	76	90	84	0	0	39	62	-8	
Westport	15,053	0	143	41	117	0	0	63	124	26	
Westwood	13,902	0	160	66	137	0	0	45	20	23	
Weymouth	53,708	3,803	654	857	493	6	4	283	174	161	

Table A-5A (continued)  
Vital Events by Community,  
Massachusetts: 2006

Community	Population <sup>1</sup>	Live Births		Deaths		Infant Deaths <sup>2</sup>		Marriages		Resident Natural Increase
		Occurrence	Resident	Occurrence	Resident	Total	Neonatal	Licenses Issued <sup>4</sup>	Occurrence <sup>3</sup>	
Whately	1,584	0	9	5	15	0	0	10	13	-6
Whitman	14,424	1	196	22	83	1	0	82	60	113
Wilbraham	13,960	0	97	166	136	0	0	54	57	-39
Williamsburg	2,433	0	25	8	16	0	0	9	15	9
Williamstown	8,276	1	54	117	72	0	0	41	50	-18
Wilmington	21,431	0	255	144	160	0	0	76	54	95
Winchendon	10,085	1	121	26	72	0	0	47	36	49
Winchester	21,139	1,907	212	424	193	1	1	49	60	19
Windsor	858	0	4	1	7	0	0	8	6	-3
Winthrop	17,067	0	148	87	198	1	0	81	70	-50
Woburn	37,074	1	465	134	272	5	5	240	210	193
Worcester	179,839	6,210	2,596	2,923	1,656	13	10	1,524	1,392	940
Worthington	1,291	0	9	0	8	0	0	8	5	1
Wrentham	11,066	0	137	102	111	0	0	42	122	26
Yarmouth	24,663	1	225	194	366	1	1	148	222	-141
Unknown	0	0	0	0	0	0	0	10	1	0

1. Population estimates for Massachusetts cities and towns: July 1, 2005. Population Program, Massachusetts; they do not sum to the 2006 estimate of the total state population.

2. Infant and neonatal deaths are included in total resident deaths. 3. Marriage intentions may be filed in any Massachusetts community, regardless of where the parties reside or where the marriage ceremony occurs. 4. Marriage figures reflect occurrence, not residence.

Table A-5B Vital Events by County, Massachusetts: 2006										
Community	Population <sup>1</sup>	Live Births		Deaths		Infant Deaths <sup>2</sup>		Marriages <sup>3,4</sup>	Divorces	Resident Natural Increase
		Occurrence	Resident	Occurrence	Resident	Total	Neonatal			
STATE TOTAL	6,437,193	78,511	77,670	54,176	53,293	369	279	37,993	14,621	24,377
Barnstable	226,505	1,576	1,905	2,527	2,673	8	4	2,884	535	-768
Berkshire	131,965	1,198	1,240	1,508	1,451	0	0	935	363	-211
Bristol	547,711	4,874	6,637	4,464	4,862	39	27	2,925	1,508	1,775
Dukes	15,605	160	175	115	132	0	0	411	63	43
Essex	750,463	7,785	9,062	5,980	6,218	39	33	4,225	1,631	2,844
Franklin	72,415	473	675	478	642	1	1	421	276	33
Hampden	466,739	6,263	5,792	4,743	4,489	41	30	2,637	1,253	1,303
Hampshire	153,981	1,049	1,234	1,039	1,207	2	2	849	378	27
Middlesex	1,464,179	15,736	17,795	10,337	10,855	79	66	7,502	2,076	6,940
Nantucket	10,095	127	145	51	62	0	0	287	46	83
Norfolk	656,472	4,361	7,696	4,925	5,426	18	12	3,174	1,507	2,270
Plymouth	497,687	3,436	5,908	3,550	4,021	34	23	2,441	1,294	1,887
Suffolk	655,181	22,019	9,498	7,753	4,802	57	44	4,616	1,321	4,696
Worcester	787,943	9,454	9,908	6,706	6,453	51	37	4,685	2,370	3,455
Unknown	0	0	0	0	0	0	0	1	0	0

1. Population estimates for Massachusetts counties: July 1, 2005. Population Program, Massachusetts; they do not sum to the 2006 estimate of the total state population.

2. Infant and neonatal deaths are included in total resident deaths. 3. Marriage intentions may be filed in any Massachusetts community, regardless of where the parties reside or where the marriage ceremony occurs. 4. Marriage figures reflect occurrence, not residence.

## BIRTHS





## SECTION B

### BIRTHS

There were 77,670 live births to Massachusetts residents in 2006, a 1.1% increase from the 76,824 resident live births in 2005. Live births to Massachusetts residents include all births to Massachusetts residents, regardless of the state in which the births occurred. Most data presented in this section are resident data.

#### OCCURRENCE BIRTHS

In 2006, 78,511 births occurred in Massachusetts. All but 342 births occurred at the 51 licensed maternity facilities in this state. The number of babies delivered at these maternity facilities ranged from 83 at The North Shore Birth Center to 8,418 at Brigham and Women's Hospital in Boston. The four hospitals with the greatest numbers of births were: Brigham and Women's Hospital (8,418), Beth Israel Deaconess Medical Center (4,948), UMass Memorial Medical Center (4,346), and Baystate Medical Center (4,291). Births from these hospitals represented 28.0% of all births occurring in Massachusetts. The distribution of Massachusetts births by hospital size is presented below.

Table B-1. 2006 Distribution of Massachusetts Occurrence Births by Facility

NUMBER OF BIRTHS AT HOSPITAL	NUMBER OF HOSPITALS IN CATEGORY	TOTAL NUMBER OF BIRTHS IN CATEGORY	% OF TOTAL BIRTHS
< 500	11	2,885	3.7
500-999	10	6,925	8.8
1000-1499	12	14,746	18.8
1500-1999	9	16,477	21.0
≥ 2000	9	37,136	47.3
All other <sup>1</sup>		342	0.4
TOTAL	51	78,511	100.0 <sup>2</sup>

<sup>1</sup> Includes hospitals without maternity units, home births, births en route to hospital and births occurring in a doctor's office/clinic.

<sup>2</sup> Percents may not sum to 100.0 due to rounding.

## BIRTHS BY RACE/ETHNICITY

There are two points to keep in mind when analyzing 2006 data by race/ethnicity. First, since June 1986, information on both race and ethnicity rather than just race has been collected. This provides improved data, particularly for Hispanic births. Presented for comparison below are resident birth data for calendar years 2005 and 2006, utilizing maternal race and Hispanic ethnicity information:

Table B-2. Race and Hispanic Ethnicity of Mother,  
Massachusetts Residents: 2005 - 2006

MATERNAL RACE/ETHNICITY	2006		2005		CHANGE (2005-2006)
	TOTAL BIRTHS	% OF BIRTHS	TOTAL BIRTHS	% OF BIRTHS	
White non-Hispanic	52,975	68.2	53,469	69.6	-494
Black non-Hispanic	6,452	8.3	6,077	7.9	375
Hispanic	10,696	13.8	10,061	13.1	635
Asian	5,469	7.0	5,251	6.8	218
Other <sup>1</sup>	1,995	2.6	1,868	2.4	127
Unknown <sup>2</sup>	83	0.1	98	0.1	-15
TOTAL <sup>3</sup>	77,670	100	76,824	100	846

<sup>1</sup> Other races include American Indian and Other.

<sup>2</sup> Unknown race: mothers did not indicate a race/ethnicity.

<sup>3</sup> Percents do not sum to 100.0 due to rounding.

The other point which must be considered is the method used to present data by race/ethnicity. Massachusetts follows the recommendation from the National Center for Health Statistics (NCHS) for classifying race/ethnicity on the birth certificate according to the self-reported race/ethnicity of the mother. Beginning with 1989 births, birth data are presented by race/ethnicity of the mother only.

## TEEN BIRTHS

The number of births to mothers ages 15-19 increased from 4,539 in 2005 to 4,722 in 2006. The teen birth rate declined from 21.7 to 21.3 births per 1,000 women ages 15-19 during these years. The percentage of total births to women under age 20 decreased markedly, from a peak of 12.7% in 1975 to 5.8% in 2004 and then rose the next two years to be 6.2% in 2006.

## BIRTHS BY MARITAL STATUS

The percentage of births to unmarried women increased from 30.2% of all resident births in 2005 to 32.2% of all resident births in 2006. Over 90% of the mothers under the age of 20 were unmarried while 28.1% of the mothers who were 20 years of age or older were unmarried.

## BIRTHS BY AGE OF MOTHER

The largest percentage increases in births between the years 2005 and 2006 (13.3%) were to mothers in the 45 and older age group, as shown below. Numbers are based on those with known values.

Table B-3 Births by Age of Mother, Massachusetts Residents: 2005-2006

AGE OF MOTHER	NUMBER OF BIRTHS 2006	NUMBER OF BIRTHS 2005	DIFFERENCE IN THE NUMBER OF BIRTHS 2005-2006	PERCENTAGE CHANGE 2005-2006
< 20	4,778	4,598	180	3.9
<del>25-29</del>	12,420	11,805	615	5.2
25-29	18,633	18,026	-67	3.4
30-34	23,611	24,140	-529	-2.2
35-39	14,749	14,740	9	0.1
40-44	3,256	3,323	-67	-2.0
≥ 45	213	188	25	13.3

Note: Table is based on birth records with known values.

## BIRTHS BY CESAREAN SECTION

The number of Cesarean section deliveries to Massachusetts residents increased from 24,732 in 2005 to 25,901 in 2006, an increase of about 2.8%. Cesarean section was the method of delivery for 33.3% of the 2006 occurrence births, compared to the 32.5% of deliveries in 2005. (Calculations are based on births with known method of delivery.)



## HOSPITAL PROFILES

The following is a synopsis of hospital data.

- In 2006, 78,511 births occurred in Massachusetts, a decrease of 5.0% since 2000. Cesarean section was the method of delivery for 33.3% of 2006 births. (Calculations are based on births with known method of delivery.)
- Statewide, the lowest rates of Cesarean section deliveries were at the following hospitals: Holyoke Hospital (19.9%), Nantucket Cottage Hospital (20.2%), Heywood Memorial Hospital (20.6%), Tobey Hospital (22.3%), Franklin Medical Center (22.4%), Martha's Vineyard Hospital (23.1%), Mercy Medical Center (23.2%), North Adams Regional Hospital (24.3%), Fairview Hospital (25.4%), Leominster Hospital (25.6%), Mount Auburn Hospital (26.7%), Saint Vincent Hospital (27.4%), and UMASS Memorial Medical Center- West Campus (27.9%).
- At least 10% of the births in seven hospitals were low birthweight. These hospitals were: Tufts- New England Medical Center Hospital (28.9%), Caritas St. Elizabeth's Medical Center (13.4%), Baystate Medical Center (12.6%), Beth Israel Deaconess Medical Center (11.1%), Brigham and Women's Hospital (10.8%), UMASS Memorial Medical Center (10.5%), and Boston Medical Center (10.0%).
- In nine hospitals, 50% or more of the deliveries were paid with public funds: Boston Medical Center (86.7%), Cambridge Hospital (74.9%), Holyoke Hospital (69.6%), Brockton Hospital (65.2%), North Adams Regional Hospital (57.7%), Mercy Medical Center (56.7%), Lawrence General Hospital (54.3%), Caritas Good Samaritan Medical Center (52.4%), Mary Lane Hospital (50.6%), Morton Hospital (50.1%), and Harrington Memorial Hospital (50.0%). In four facilities, less than 10% of deliveries were paid with public funds: Saint Vincent Hospital (9.8%), Winchester Hospital (5.3%), Emerson Hospital (4.0%), and Newton-Wellesley Hospital (3.6%).
- 26 of the 49 hospitals exceeded the state-wide average, 83.2%, for adequacy of prenatal care for their patients. The three hospitals with the lowest reported rate of women who had received adequate prenatal care were: Boston Medical Center (52.9%), Caritas Good Samaritan Medical Center (61.3%), and Caritas Norwood Hospital (63.4%).
- Ten hospitals had Cesarean section delivery rates of 37.5% or more: Caritas Holy Family Hospital and Medical Center (44.0%), Caritas Good Samaritan Medical Center (41.6%), Metrowest Medical Center- Framingham Union (41.5%), Tufts – New England Medical Center Hospital (41.3%), Beth Israel Deaconess Medical Center (41.2%), South Shore Hospital (40.5%), Caritas St. Elizabeth's Medical of Boston (40.4%), Melrose-Wakefield Hospital Boston (40.1%), Brockton Hospital (39.1%), and Emerson Hospital (38.3%).



## LOW BIRTHWEIGHT INFANTS

The percentage of low birthweight infants (less than 2,500 grams or 5.5 pounds) remained constant at 7.9% between 2005 and 2006. The number of low birthweight deliveries to Massachusetts residents increased from 6,073 births in 2005 to 6,150 births in 2006.

DEFINITIONS IMPORTANT FOR THIS SECTION INCLUDE:

### ADEQUACY OF PRENATAL CARE UTILIZATION

Beginning in 2001, adequacy of prenatal care is being measured using a new method. The Adequacy of Prenatal Care Utilization (APNCU) Index, developed by Dr. Milton Kotelchuck, replaced the Kessner Index. The APNCU Index is the standard used in Healthy People 2010 and by the majority of states. It improves upon the Kessner Index in various ways, the most important being the ability to distinguish between inadequate prenatal care due to the timing of initiation and inadequate care due to insufficient prenatal care visits. The APNCU Index also improves upon the Kessner Index by correcting some of its principal faults. First, the APNCU Index more accurately assesses adequacy of visits for term pregnancies; the Kessner Index characterizes 9 or more visits as adequate, due to an early computer database limitation, which only allowed for a single-digit number to record prenatal care visits. Other limitations of the Kessner Index include its bias towards measurement of adequacy of initiation of care, and its various computational algorithms based upon inadequate initial documentation.

Below are the definitions for the APNCU Index categories and its two component indices (initiation and received services), and the definition of the Kessner Index categories. Also following is a short summary of the major differences in classification of adequacy of prenatal care using the Kessner Index and the APNCU Index.

#### Adequacy of Prenatal Care Utilization (APNCU) Index: Definition of Categories

Category	Month Prenatal Care Began	% of Expected <sup>1</sup> Prenatal Care
Adequate Intensive	1, 2, 3, or 4	110% or more
Adequate Basic	1, 2, 3, or 4	80 – 109%
Intermediate	1, 2, 3, or 4	50 – 79%
Inadequate	Month 5 or later	Less than 50%
Unknown	Prenatal care information not recorded	

1. The number of "expected" visits is determined based on standards set by the American College of Obstetricians and Gynecologists (ACOG).

## Component Indices of the APNCU Index: Definitions of Categories

### **Adequacy of Initiation Index**

Category	Month Prenatal Care Began
Adequate Intensive	1 or 2
Adequate Basic	3 or 4
Intermediate	5 or 6
Inadequate	Month 7 or later, or no PNC
Unknown	Prenatal care initiation information not recorded

### **Adequacy of Received Services (Visits) Index**

Category	% of Expected <sup>1</sup> Prenatal Care Visits
Adequate Intensive	110% or more
Adequate Basic	80 – 109%
Intermediate	50 – 79%
Inadequate	Less than 50%
Unknown	Information on prenatal care visits not recorded

1. The number of “expected” visits is determined based on standards set by the American College of Obstetricians and Gynecologists (ACOG).

## Kessner Index of Adequacy of Prenatal Care: Definition of Categories

Category	Trimester Care Began	Number of Visits
Adequate	1	9 or more
Intermediate	1	5-8
	2	5 or more
Inadequate	1	1-4
	2	1-4
	3	1 or more
No Prenatal	--	0
Unknown	Unknown	Unknown

## Summary of Major Differences in Categorization of Adequacy of Prenatal Care between the Kessner Index and the APNCU Index

The two different methods used in the Kessner Index and APNCU Index to calculate adequacy of prenatal care can result in differences in how each one classifies adequacy

of prenatal care. These differences only occur under certain conditions, not in all cases (see "Explanation" column).

The Kessner Index classifies prenatal care as...	... but the APNCU Index classifies prenatal care as ...	Explanation
Intermediate	Adequate Basic	This is primarily due to the fact that the APNCU Index allows for prenatal care in the 4 <sup>th</sup> month of pregnancy to be considered adequate if the mother received 80-109% of expected visits, whereas the Kessner Index only allows for care begun in the first trimester (months 1-3) to be considered adequate.
Intermediate	Inadequate	This is primarily due to the fact that the APNCU categorizes any prenatal care beginning after month 4 as "inadequate" whereas the Kessner Index allows for care beginning in months 5 or 6 with 5 or more visits to be "intermediate."
Adequate	Intermediate	This is primarily due to the consideration of "expected" visits (based on when the mother initiated care and the length of gestation) using the APNCU Index, which bases expected visits on the ACOG recommendations, which can be as high as 14 visits if a gestational period is 40 weeks, whereas the Kessner Index considers 9 visits sufficient in all cases.
Adequate	Adequate Intensive	The APNCU Index added an "Adequate Intensive" category, which is not used in the Kessner Index. This allows analysis of situations in which more than normal care is received (e.g. women with high risk conditions, pregnancy complications).

## ANCESTRY

A self-reported item on the birth certificate, with listings and an open text field. The items listed are:

Puerto Rican	Cambodian	Cape Verdean	Other African
Dominican	Asian Indian	Brazilian	Lebanese
Mexican	Korean	Other Potuguese	Iranian
Cuban	Filipino	Haitian	Israeli
Colombian	Japanese	Jamaican	Other Mid. Eastern
Salvadorian	Loatian	Barbadian	Native American
Other Central Amer.	Pakistani	African American	European
Other South Amer.	Thai	Nigerian	Other
Other Hispanic	Hawaiian	Other West Indian / Caribbean	
Chinese	Other Asian/Pac. Isl.		

## BIRTH CERTIFICATE

A vital record signed by an informant that includes the infant's name, sex, birth date, place of residence, and place of occurrence.

## BIRTHWEIGHT

The weight of an infant recorded at the time of delivery. It may be recorded in either pounds/ounces or grams. If recorded in pounds/ounces, it is converted to grams for use in this report.

1 pound = 453.6 grams

1,000 grams = 2 pounds, 3 ounces

## BIRTHWEIGHT CATEGORIES

Normal birthweight (NBW)	An infant's weight of 2,500 grams (5.5 pounds) or more recorded at birth.
Low birthweight (LBW)	An infant's weight of less than 2,500 grams (5.5 pounds) recorded at birth.
Very low birthweight (VLBW)	An infant's weight of less than 1,500 grams (3.3 pounds) recorded at birth.

## CESAREAN SECTION or C-SECTION

Primary: A mother's first Cesarean section delivery.

Repeat: A Cesarean delivery that has been preceded by at least one Cesarean delivery.

## COMMUNITY HEALTH NETWORK AREAS (CHNA)

The Department of Public Health, in collaboration with health service providers, coalition members, and other interested citizens, has designated 27 geographic areas for community health planning. The Department of Public Health has fostered in each of these



areas the development of Community Health Networks: a consortia of health care providers, human service agencies, schools, churches, youth, parents, elders, advocacy groups, and individual consumers to address the health needs of the community. These community coalitions will participate in monitoring outcomes and the progress of strategies and responses to those health needs. The data published in this edition reflect the new definitions of CHNAs instituted in January 1997.

A Community Health Network Area (CHNA) is defined as an aggregation of cities and towns. It is hoped that the networks will mobilize around key health issues impacting the community, promote prevention efforts, enhance access to health care, provide opportunities for more collaboration among agencies, and create a client-centered, outcome-oriented health service delivery system. Community Health Networks will also promote efficiency in service delivery by working to reduce duplication and overlap, and by identifying gaps in service.

#### ETHNICITY

See Race.

#### FOREIGN-BORN WOMEN

Women not born in the United States, its possessions or protectorates. Women born in Puerto Rico, the US Virgin Islands, and Guam are not foreign-born.

#### HEALTHY START

A Massachusetts-funded program providing services and financing for prenatal care to low-income pregnant women who lack health insurance, but do not qualify for Medicaid.

#### INFANT

A child whose age is less than one year (365 days).

#### Interpregnancy Interval (IPI)

Interpregnancy interval is the time, in months, between the date of last menstrual period of current pregnancy and the date of previous live birth. IPI is calculated for each mother currently giving birth to their second or later child.

$$\% \text{ Short IPI} = \frac{\text{Number of mothers giving birth to their 2}^{\text{nd}} \text{ or later child with IPI} < 12 \text{ months}}{\text{Number of mothers giving birth to their 2}^{\text{nd}} \text{ or later child in the same year}} \times 100$$

$$\% \text{ IPI 12 to 35 months} = \frac{\text{Number of mothers giving birth to their 2}^{\text{nd}} \text{ or later child with IPI between 12 and 35 months}}{\text{Number of mothers giving birth to their 2}^{\text{nd}} \text{ or later child in the same year}} \times 100$$



$$\begin{array}{lcl} \% \text{ IPI} & = & \frac{\text{Number of mothers giving birth to their 2}^{\text{nd}} \text{ or later child with IPI} \\ \text{36+ months} & & \text{>=36 months}}{\text{Number of mothers giving birth to their 2}^{\text{nd}} \text{ or later child in the}} \times 100 \\ & & \text{same year} \end{array}$$

### LIVE BIRTH

A live birth is any infant who breathes or shows any other evidence of life (such as beating of the heart, pulsation of the umbilical cord, or definite movement of voluntary muscles) after separation from the mother's uterus, regardless of the duration of gestation.

### LOW BIRTHWEIGHT (LBW)

See Birthweight Categories.

### NEONATAL

Referring to a child under 28 days of age.

### NORMAL BIRTHWEIGHT (NBW)

See Birthweight Categories.

### OCCURRENCE BIRTH

A birth occurring in the Commonwealth of Massachusetts, regardless of the residency of the mother. In Massachusetts, the place will be one of the 351 cities or towns. See Resident Birth.

### PARITY

Total number of live births, including the present birth, ever born to the mother.

### PLURALITY

The number of births to a woman produced in the same gestational period. A singleton is the birth of one infant, twins represent the births of two infants, etc.

### POST NEONATAL

Referring to a child whose age is at least 28 days, but less than one year.

### PRETERM

Referring to a child born before the 37<sup>th</sup> week of gestation.

### PRIMARY CESAREAN SECTION or C-SECTION

See Cesarean Section.

### RACE

Race of mother: For data presented in this publication, mother's race is reported by the infant's mother. The tables that use race or ethnicity in this document all refer to the mother's race or ethnicity.

Ethnicity: Beginning in 1986, an identifier for Hispanic and other ethnicities was added to the birth certificate. Prior to this change, most Hispanics were included with Whites and it was not possible to accurately calculate Hispanic-specific rates of natality.

### REPEAT CESAREAN SECTION or C-SECTION

See Cesarean Section.

### RESIDENT BIRTH

The birth of an infant whose mother reports that her usual place of residence is in Massachusetts. In Massachusetts, a resident is a person with a permanent address in one of the 351 cities or towns. Vital statistics data may be presented in terms either of residence or occurrence. Unless otherwise noted, all data in this publication are resident data. Resident data include all events that occur to residents of the Commonwealth, wherever they occur. Occurrence data include all events that occur within the state, whether to residents or non-residents. There is an exchange agreement among the 50 states, Canada, Puerto Rico, Guam, the Virgin Islands, and the District of Columbia that provides for exchange of copies of birth and death records. These records are used for statistical purposes only, and allow each state or province to track the births and deaths of its residents.

### VAGINAL BIRTH AFTER CESAREAN (VBAC)

A vaginal delivery of an infant to a mother who has had at least one prior Cesarean section delivery.

### VERY LOW BIRTHWEIGHT (VLBW)

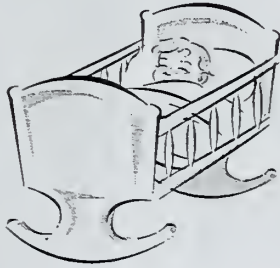
See Birthweight Categories.

RATES IMPORTANT FOR THIS SECTION INCLUDE:

AGE-SPECIFIC BIRTH RATE	$\frac{\text{No. of Resident Live Births for a Specific Age Group of Mothers}}{\text{Total Female Population of That Specific Age Group}} \times 1,000$
CRUDE BIRTH RATE	$\frac{\text{No. of Resident Live Births}}{\text{Total Resident Population}} \times 1,000$
GENERAL FERTILITY RATE	$\frac{\text{No. of Resident Live Births}}{\text{Total Female Population of Childbearing Age (15-44)}} \times 1,000$
CESAREAN SECTION or C-SECTION RATE	$\frac{\text{No. of Resident Births Delivered by C-Section}}{\text{Number of Resident Births Total}} \times 100$

**Figure B-1. Daily Birth Statistics, Massachusetts: 2006**

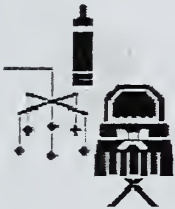
Every day in 2006, residents of Massachusetts experienced an average of:



213 Births



71 Births by Cesarean Section



50 Births to women aged 35 or older



36 Births with less than adequate prenatal care



19 Births weighing less than 2500 grams or 5 lbs. 8 oz. (low birthweight)



13 Births to women aged 15 through 19



Table B-4. Trends in Birth Characteristics, Massachusetts: 1990, 1991, 1994-2006

Characteristic	1990	1991	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Births <sup>1</sup>	n <sup>2</sup> Rate <sup>3</sup>	92,461 62.1	88,176 59.4	83,758 57.0	81,562 55.5	80,164 54.6	80,321 54.7	81,406 55.6	80,866 55.9	81,582 57.1	81,014 56.6	80,624 56.8	80,167 56.8	78,460 56.2	77,670 56.9
Race of Mother															
White non-Hispanic	n % <sup>4</sup>	72,483 78.4	68,619 77.8	64,589 77.1	63,043 77.3	61,829 77.1	61,204 76.2	61,764 75.9	60,402 74.7	60,051 73.6	59,115 73.0	58,136 72.1	57,604 71.9	55,322 70.5	52,975 68.2
Black non-Hispanic	n % <sup>4</sup>	7,158 7.7	6,737 7.6	6,262 7.5	5,858 7.2	5,491 6.9	5,482 6.8	5,549 6.8	5,844 7.2	5,755 7.1	5,862 7.2	5,948 7.4	5,902 7.4	6,053 7.7	6,452 8.3
Asian	n % <sup>4</sup>	3,349 3.6	3,218 3.7	3,325 4.0	3,355 4.1	3,398 4.2	3,719 4.6	3,748 4.6	4,138 5.2	4,667 5.7	4,784 5.9	5,300 6.6	5,224 6.5	5,454 7.0	5,469 7.0
Hispanic	n % <sup>4</sup>	8,406 9.1	8,477 9.6	8,429 10.1	8,077 9.9	7,756 9.7	8,211 10.2	8,665 10.6	8,815 10.9	9,247 11.3	9,410 11.6	9,543 11.8	9,764 12.2	9,798 12.5	10,696 13.8
Teen Births (Ages 15-19)	n Rate <sup>3</sup>	7,258 35.4	6,892 35.4	6,412 33.2	5,990 30.3	5,758 28.5	5,801 28.5	5,823 28.1	5,515 26.7	5,305 25.9	4,979 24.9	4,642 23.3	4,639 23.0	4,559 22.2	4,722 21.3
Births to Unmarried Mothers	n %	22,837 24.7	22,852 25.9	22,302 26.6	20,857 25.6	20,253 25.3	20,640 25.7	21,191 26.0	21,448 26.5	21,621 26.5	21,620 26.7	21,604 26.8	22,262 27.8	22,376 28.5	24,977 32.2
C-section	n %	20,615 22.3	19,495 22.1	17,289 20.6	16,758 20.6	15,675 19.6	15,742 19.6	16,975 20.9	18,080 22.4	19,086 23.4	20,639 25.5	22,553 28.0	23,392 29.2	24,295 31.0	25,901 33.4
Gestational Diabetes <sup>5</sup>	n %								2,245 2.8	2,402 3.0	2,633 3.3	2,693 3.4	2,741 3.5	2,666 3.5	2,925 3.8
Low Birthweight	n %	5,388 5.8	5,199 5.9	5,335 6.4	5,174 6.4	5,105 6.4	5,617 7.0	5,655 7.0	5,708 7.1	5,711 7.1	5,795 7.2	6,060 7.5	6,115 7.6	6,125 7.8	6,150 7.9
Preterm	n %	5,899 6.5	6,492 7.8	6,492 7.8	6,438 7.9	5,705 7.2	5,831 7.3	6,117 7.6	6,136 7.6	6,582 8.3	6,412 8.0	6,795 8.5	6,963 8.7	7,222 9.2	6,954 9.0
Adequate Prenatal Care															
Kessner Index <sup>6</sup>	%	80.1	81.6	84.3	84.2	79.9	80.0	79.8	79.4	79.1	80.4	79.9	79.9	79.5	77.6
APNCU Index <sup>7</sup>	%					83.3	82.9	82.9	82.9	83.3	85.2	84.7	84.5	84.2	83.1

NOTE: All percentages are calculated based on only those births with known values for the characteristic(s) of interest, unless otherwise stated.

1. Births presented in all tables are resident live births unless otherwise specified. 2. Differences in numbers of births from previous publications are the result of updated files. 3. Birth rates represent the total number of births to women ages 15-44 years per 1,000 females ages 15-44; teen birth rates refer to number of births per 1,000 women ages 15-19. 2000-2005 birth rates are calculated Massachusetts (Department of Public Health) Modified Age, Race/Ethnicity, & Sex Estimates 2000-2005 (MMARS00-05), released October 2006. 2006 rates are calculated using the NCHS population estimates for 2006 by age, sex, race, and Hispanic origin. 1999 rates are calculated using the 1999 DPH Massachusetts population estimates. PLEASE NOTE: DIFFERENCES BETWEEN THESE RATES AND PREVIOUSLY PUBLISHED DATA REFLECT UPDATES IN POPULATION ESTIMATES. 4. Percentages are calculated based on births, including those to mothers of unknown race. 5. Gestational diabetes is defined as glucose intolerance found during pregnancy for the first time. It excludes cases with pre-existing diabetes. 6. Adequacy of prenatal care in Massachusetts has historically been measured with the Kessner Index, based on the timing of care and number of visits. This measure is calculated based on only those births with known adequacy of prenatal care. Changes in the calculation of the Kessner Index in 1996, as well as computational adjustments made for 1996-2000 data, make data prior to 1996 non-comparable to 1996 onward. 7. Beginning with *Births 2007*, the APNCU Index has replaced the Kessner Index as the standard measurement of adequacy of prenatal care (see Section Definitions for more information).



**Table B-5A. Birth Characteristics by Maternal Race and Hispanic Ethnicity and Birthplace, Massachusetts: 2006**

Race and Hispanic Ethnicity (by mother's birthplace)	Births		Teen Births				Birthweight				Prenatal Care				Cesarean Section				Breastfeeding <sup>6</sup>	
	n	% <sup>1</sup>	<18 Years		<20 Years		Very Low <sup>2</sup>		Low <sup>3</sup>		Adequate <sup>4</sup>		1 <sup>st</sup> Trimester		Section					
			n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
<b>State Total</b>	77,670	100.0	1,435	1.8	4,778	6.2	1,041	1.3	6,150	7.9	63,781	83.1	63,326	82.1	25,901	33.4	61,076	79.9		
U.S. States/D.C.	54,655	70.4	1,129	2.1	3,690	6.8	718	1.3	4,332	7.9	45,889	84.9	45,950	84.6	18,435	33.8	40,564	75.7		
Puerto Rico/U.S. Terr. <sup>7</sup>	2,079	2.7	132	6.4	383	18.4	40	1.9	221	10.6	1,549	75.1	1,523	73.5	608	29.3	1,539	74.3		
Non-U.S.-Born <sup>8</sup>	20,929	26.9	173	0.8	704	3.4	282	1.3	1,594	7.6	16,339	79.2	15,850	76.6	6,855	32.9	18,969	91.3		
<b>White Non-Hispanic</b>	52,975	68.2	519	1.0	2,115	4.0	590	1.1	3,799	7.2	45,062	85.8	45,310	85.8	18,443	34.9	40,639	78.2		
U.S. States/D.C.	46,396	87.6	501	1.1	1,964	4.2	512	1.1	3,362	7.3	39,625	86.2	39,948	86.4	16,127	34.8	34,676	76.3		
Puerto Rico/U.S. Terr. <sup>7</sup>	57	0.1	1	-- <sup>6</sup>	6	10.5	1	-- <sup>6</sup>	3	5.3	41	73.2	44	78.6	18	31.6	47	83.9		
Non-U.S.-Born <sup>8</sup>	6,519	12.3	16	0.2	144	2.2	77	1.2	434	6.7	5,394	83.4	5,316	81.8	2,298	35.3	5,914	91.7		
<b>Black non-Hispanic</b>	6,452	8.3	215	3.3	620	9.6	220	3.4	806	12.5	4,728	75.2	4,539	71.9	2,143	33.3	5,172	80.7		
U.S. States/D.C.	3,337	51.7	193	5.8	544	16.3	124	3.7	463	13.9	2,498	76.8	2,395	73.3	996	30.0	2,319	70.1		
Puerto Rico/U.S. Terr. <sup>7</sup>	24	0.4	0	0.0	0	0.0	0	0.0	2	8.3	21	87.5	22	91.7	7	29.2	19	82.6		
Non-U.S.-Born <sup>8</sup>	3,090	47.9	22	0.7	76	2.5	95	3.1	340	11.0	2,209	73.4	2,122	70.2	1,139	37.0	2,834	92.0		
<b>Hispanic</b>	10,696	13.8	588	5.5	1,709	16.0	131	1.2	895	8.4	7,980	75.6	7,675	72.4	2,998	28.1	8,821	82.6		
U.S. States/D.C.	3,438	32.1	339	9.9	924	26.9	57	1.7	346	10.1	2,618	77.0	2,492	72.9	929	27.1	2,460	71.8		
U.S. Territories	1,984	18.5	131	6.6	375	18.9	37	1.9	213	10.8	1,476	74.9	1,445	73.0	581	29.3	1,464	73.9		
Non-U.S.-Born <sup>8</sup>	5,273	49.3	118	2.2	410	7.8	37	0.7	335	6.4	3,886	74.9	3,738	71.8	1,487	28.2	4,897	92.9		
<b>Asian</b>	5,469	7.0	63	1.2	147	2.7	52	1.0	436	8.0	4,435	81.6	4,241	77.9	1,642	30.0	4,746	86.8		
U.S. States/D.C.	677	12.4	55	8.1	125	18.5	7	1.0	67	9.9	523	77.4	495	73.2	163	24.1	540	79.8		
Puerto Rico/U.S. Terr. <sup>7</sup>	4	-- <sup>6</sup>	0	0.0	0	0.0	0	0.0	0	0.0	4	-- <sup>6</sup>	4	-- <sup>6</sup>	0	0.0	4	-- <sup>6</sup>		
Non-U.S.-Born <sup>8</sup>	4,788	87.5	8	0.2	22	0.5	45	0.9	369	7.7	3,908	82.2	3,742	78.5	1,479	30.9	4,202	87.8		
<b>American Indian<sup>9</sup></b>	115	0.1	5	4.3	18	15.7	1	-- <sup>6</sup>	10	8.7	92	80.0	91	79.1	28	24.3	86	76.1		
U.S. States/D.C.	107	93.0	5	4.7	18	16.8	1	-- <sup>6</sup>	9	8.4	84	78.5	83	77.6	26	24.3	80	76.2		
U.S. Territories	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0		
Non-U.S.-Born <sup>8</sup>	8	7.0	0	0.0	0	0.0	0	0.0	1	-- <sup>6</sup>	8	100.0	8	100.0	2	-- <sup>6</sup>	6	75.0		
<b>Other<sup>10</sup></b>	1,880	2.4	45	2.4	167	8.9	46	2.5	194	10.3	1,450	79.1	1,433	77.4	627	33.5	1,582	87.7		
U.S. States/D.C.	643	34.2	36	5.6	113	17.6	16	2.5	80	12.5	519	82.8	513	80.8	182	28.3	468	76.0		
Puerto Rico/U.S. Terr. <sup>7</sup>	10	0.5	0	0.0	2	-- <sup>6</sup>	2	-- <sup>6</sup>	3	-- <sup>6</sup>	7	6.1	8	7.0	2	-- <sup>6</sup>	5	4.3		
Non-U.S.-Born <sup>8</sup>	1,226	65.2	9	0.7	52	4.2	28	2.3	111	9.1	923	77.0	911	75.5	443	36.3	1,108	93.9		
<b>Unknown<sup>11</sup></b>	83	0.1	0	0.0	2	-- <sup>6</sup>	1	-- <sup>6</sup>	10	20.0	34	85.0	37	78.7	20	41.7	30	96.8		

NOTE: All percentages are calculated based on only those births with known values for the characteristic(s) of interest, unless otherwise stated.

1. This column "Births %", the percentages of the race/Hispanic groups (bolded) are based on the state total (including births of unknown race/ethnicity), and the birthplace percentages for the race/ethnicities are based on the total number in race/Hispanic ethnicity category. For all other categories, percentages are based on row totals. 2. Very low birthweight: less than 1,500 grams or 3.3 pounds. 3. Low birthweight: less than 2,500 grams or 5.5 pounds. 4. Beginning with Births 2001, the Adequacy of Prenatal Care Utilization Index has replaced the Kessner Index as the measure of adequate prenatal care. 5. Mother was breastfeeding or was intending to breastfeed at the time the birth certificate was completed. 6. Calculations based on fewer than five events are excluded. 7. The category "Puerto Rico/U.S. Territories" includes women born in Puerto Rico, the U.S. Virgin Islands, and Guam. Approximately 95% of the births in this category were to women born in Puerto Rico. 8. The category "Non-U.S.-Born" includes women born outside of the 50 U.S. states, District of Columbia, and Puerto Rico/U.S. territories. 9. This count is of mothers who selected American Indian as their race. 10. Other: Mothers indicated "Other" as a race/ethnicity. 11. Unknown: Mothers who did not indicate a race/ethnicity.

Table B-5B. Birth Characteristics by Maternal Ancestry, Massachusetts: 2006

Maternal Ancestry	Births <sup>1</sup>		Teen Births				Birthweight				Prenatal Care				Cesarean Section		Breast-feeding <sup>5</sup>		Gestational Diabetes <sup>6</sup>	
			<18 Years		<20 Years		Very Low <sup>2</sup>		Low <sup>3</sup>		Adequate <sup>4</sup>		1 <sup>st</sup> Trimester		n	%	n	%	n	%
	n	%	n	%	n	%	n	%	n	%	n	%	n	%						
State Total	77,670	100.0	1,435	1.8	4,778	6.2	1,041	1.3	6,150	7.9	63,781	83.1	63,326	82.1	25,901	33.4	61,076	79.9	2,925	3.8
American	32,662	42.1	435	1.3	1,657	5.1	382	1.2	2,421	7.4	27,812	85.6	28,074	86.2	11,023	33.8	24,356	74.6	1,143	3.5
European	13,966	18.0	44	0.3	233	1.7	115	0.8	868	6.2	12,158	87.6	12,134	87.1	4,907	35.2	11,886	85.2	434	3.1
Puerto Rican	4,591	5.9	397	8.6	1,121	24.4	79	1.7	473	10.3	3,425	75.4	3,306	72.3	1,265	27.6	3,224	70.4	168	3.7
African-American	2,967	3.8	173	5.8	480	16.2	97	3.3	391	13.2	2,221	76.9	2,155	74.3	868	29.4	2,087	70.5	95	3.2
Brazilian	2,434	3.1	16	0.7	102	4.2	25	1.0	152	6.3	1,975	81.4	1,917	79.0	1,102	45.3	2,330	95.8	71	2.9
Dominican	1,941	2.5	68	3.5	217	11.2	19	1.0	149	7.7	1,545	79.8	1,543	79.7	637	32.9	1,748	90.1	65	3.4
Chinese	1,442	1.9	3	--	4	--	12	0.8	85	5.9	1,282	89.4	1,205	83.8	428	29.7	1,295	89.9	101	7.0
Asian Indian	1,300	1.7	0	0.0	2	--	17	1.3	132	10.2	1,069	82.5	1,057	81.5	489	37.7	1,264	97.3	116	8.9
Salvadoran	1,198	1.5	32	2.7	108	9.0	5	0.4	68	5.7	798	69.2	764	65.8	272	22.7	1,125	94.0	44	3.7
African	1,132	1.5	6	0.5	22	1.9	27	2.4	114	10.1	820	73.4	767	68.5	410	36.3	1,049	92.7	61	5.4
Haitian	1,064	1.4	9	0.8	30	2.8	40	3.8	144	13.6	739	72.5	693	67.7	435	41.0	966	90.8	63	6.0
Portuguese	971	1.3	21	2.2	72	7.4	10	1.0	76	7.8	827	85.3	822	84.7	331	34.1	522	53.9	51	5.3
Cape Verdean	931	1.2	30	3.2	112	12.0	21	2.3	84	9.0	655	71.3	617	67.1	286	30.8	769	82.7	21	2.3
Guatemalan	866	1.1	23	2.7	84	9.7	4	--	59	6.8	605	71.0	518	60.4	188	21.7	785	90.6	33	3.8
Vietnamese	741	1.0	9	1.2	22	3.0	6	0.8	54	7.3	594	81.1	564	76.9	203	27.4	567	76.5	46	6.2
Cambodian	611	0.8	46	7.5	98	16.0	3	--	56	9.2	385	63.2	332	54.4	106	17.4	348	57.0	20	3.3
Mexican	490	0.6	16	3.3	45	9.2	7	1.4	31	6.3	371	76.8	364	75.2	161	32.9	456	93.3	27	5.6
South American	484	0.6	9	1.9	29	6.0	4	--	25	5.2	376	78.3	361	75.1	168	34.7	456	94.2	13	2.7
Middle Eastern	363	0.5	0	0.0	3	--	2	--	35	9.6	278	76.6	261	71.9	119	32.8	342	94.2	27	7.4
Colombian	357	0.5	14	3.9	28	7.8	2	--	21	5.9	272	77.1	269	76.0	86	24.1	334	93.6	10	2.8
Korean	339	0.4	0	0.0	0	0.0	4	--	20	5.9	289	85.8	287	85.2	110	32.5	330	97.3	19	5.6
Honduran	313	0.4	9	2.9	31	9.9	2	--	22	7.1	222	72.3	204	66.4	72	23.0	298	95.2	11	3.6
Jamaican	310	0.4	3	--	8	2.6	11	3.5	41	13.2	232	77.6	228	75.5	88	28.4	275	89.0	16	5.2
Native American <sup>8</sup>	231	0.3	10	4.3	35	15.2	6	2.6	16	7.0	184	79.7	175	75.8	64	27.9	175	76.4	15	6.6

NOTE: All percentages are calculated based on only those births with known values for the characteristic(s) of interest, unless otherwise stated. See the Section Definitions entry "ethnicity" (ancestry) for the complete list of ethnicities (ancestries).

1. In the first category, "Births", percentages are based on column total (state total of births, including births for which maternal ethnicity is unknown and other). For all other categories, percentages are based on row totals. 2. Very low birthweight: less than 1,500 grams or 3.3 pounds. 3. Low birthweight: less than 2,500 grams or 5.5 pounds. 4. The Adequacy of Prenatal Care Utilization Index has replaced the Kessner Index as the measure of adequate prenatal care. 5. Mother was breastfeeding or was intending to breastfeed at the time the birth certificate was completed. 6. Gestational diabetes is defined as glucose intolerance found during pregnancy for the first time. It excludes cases with pre-existing diabetes. 7. Calculations based on values of 1-4 are excluded. 8. This count is of mothers who selected Native American as their ancestry.



Figure B-2. Resident Live Births by Maternal Race and Hispanic Ethnicity, Massachusetts:  
2006

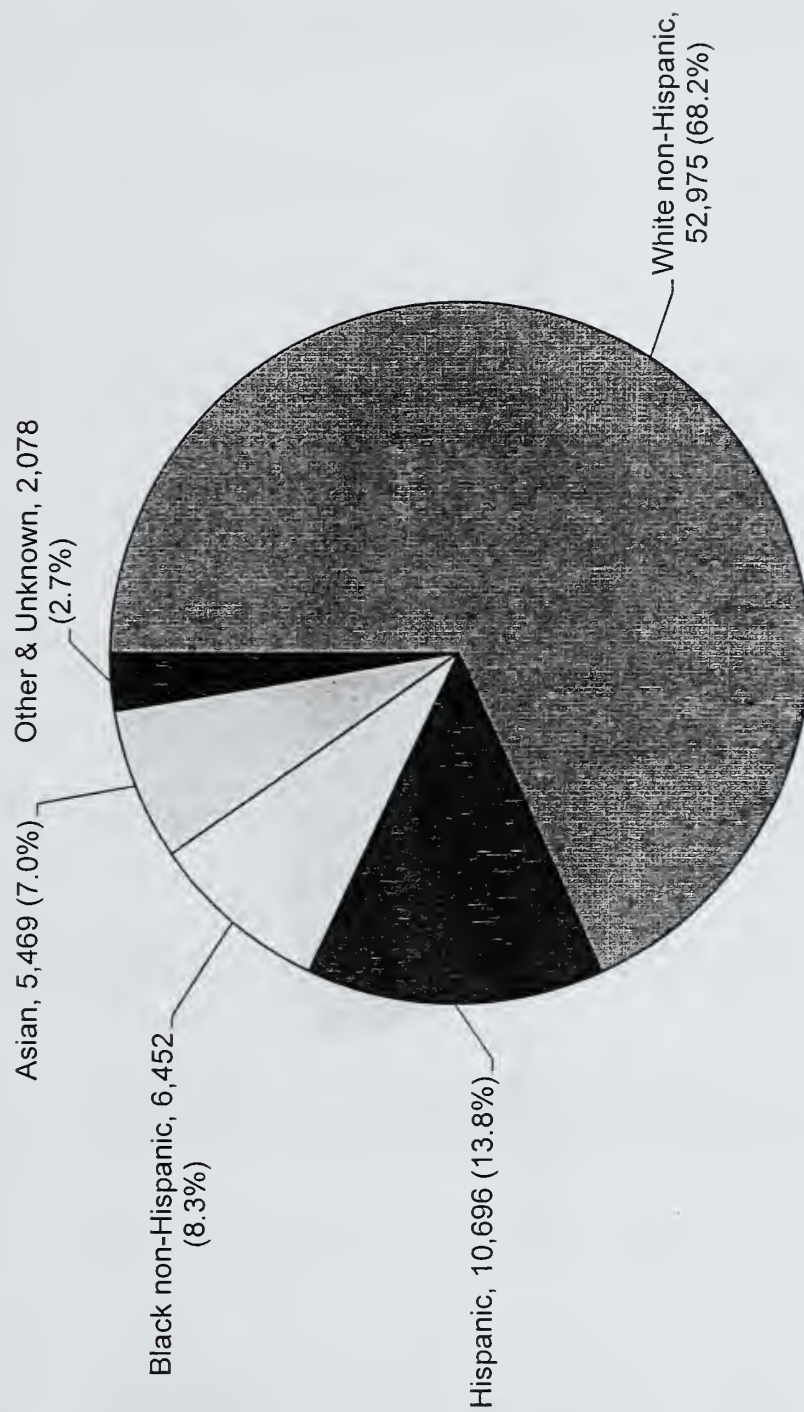
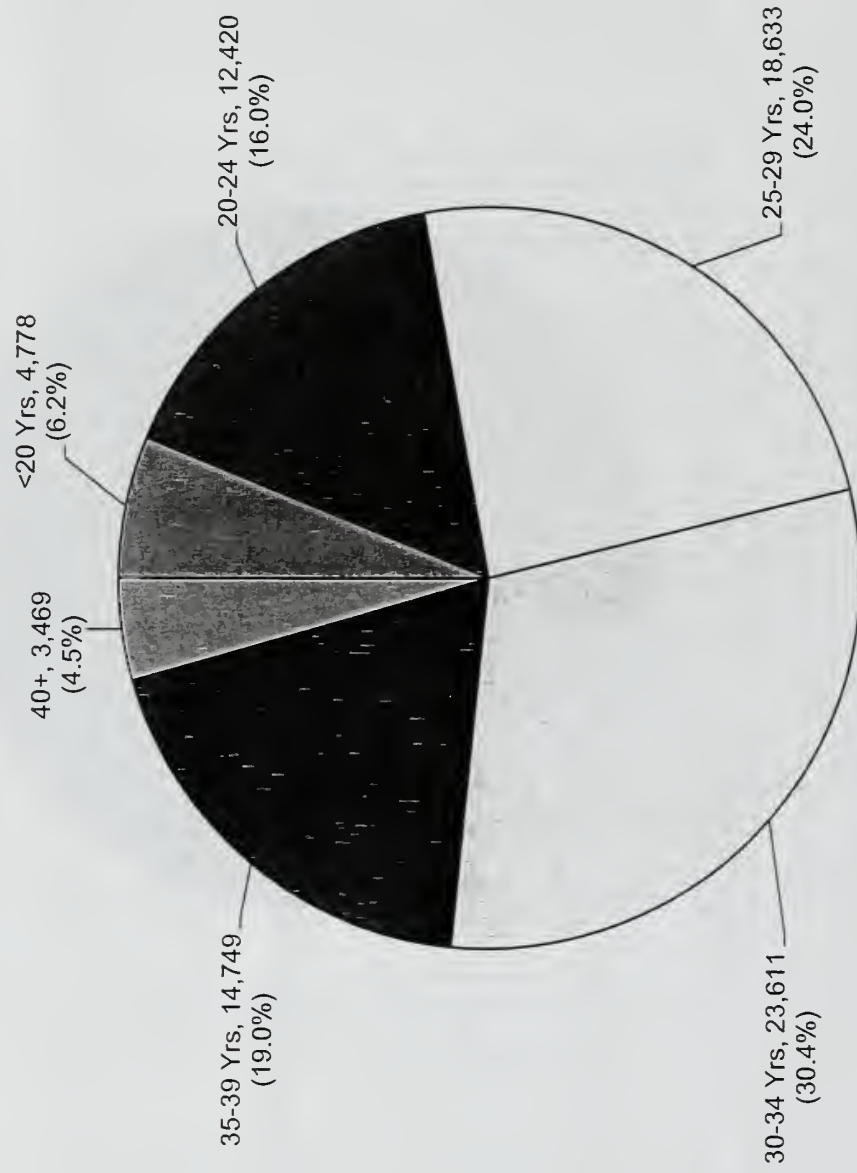


Figure B-3. Resident Live Births by Maternal Age,<sup>1</sup> Massachusetts: 2006



1. Percentages based on known values.



Table B-6A. Resident Birth Characteristics, 30 Largest Municipalities, Massachusetts: 2006

Municipality <sup>1</sup>	Rank (by pop. size)	Population	Crude Birth Rate <sup>2</sup>	Mother's Race and Ethnicity				Very Low Birthweight (<1500 g)	Low Birthweight (<2500 g)	Gestational Diabetes
				White non- Hispanic	Black non- Hispanic	Hispanic	Asian or Other <sup>4</sup>			
				% <sup>3</sup>	% <sup>3</sup>	% <sup>3</sup>	% <sup>3</sup>	%	%	%
STATE TOTAL		6,436,940	12.1	68.2	8.3	13.8	9.6	1.3	7.9	3.8
Attleboro	29	43,364	14.0	79.7	5.3	7.1	7.9	1.2	6.4	2.2
Barnstable	25	47,902	10.3	82.9	4.9	5.5	6.7	1.4	7.1	1.2
Boston	1	558,435	14.2	35.5	28.7	22.1	13.7	1.7	9.0	3.2
Brockton	6	100,366	15.3	34.9	40.4	12.2	12.5	2.5	11.5	4.4
Brookline	18	56,422	12.2	69.2	2.6	4.1	24.0	0.3	5.9	3.2
Cambridge	5	101,529	11.3	57.1	13.4	8.3	21.0	1.3	6.4	2.3
Chicopee	21	54,599	11.2	73.8	3.1	18.3	4.7	1.5	7.4	5.6
Fall River	9	92,117	13.2	78.6	5.5	10.1	5.7	1.5	10.5	8.5
Framingham	14	65,651	14.8	67.4	6.4	16.3	10.0	1.0	9.0	2.7
Haverhill	15	60,032	15.1	75.2	4.4	17.0	3.3	2.1	10.5	3.1
Lawrence	12	81,591	17.9	15.8	2.2	78.2	3.8	1.4	7.9	3.5
Leominster	30	42,120	12.6	65.6	10.5	17.5	6.4	1.9	6.0	3.0
Lowell	4	105,749	17.2	46.6	7.4	18.8	27.1	1.5	9.1	5.5
Lynn	8	92,186	16.2	32.6	12.1	47.1	8.1	1.6	8.8	2.8
Malden	17	56,730	14.9	47.8	16.0	9.0	26.9	2.3	7.5	5.5
Medford	22	53,801	12.4	71.6	11.4	5.9	11.1	1.8	7.3	2.9
Methuen	27	44,532	13.0	66.0	3.3	22.5	8.1	1.0	6.8	2.8
New Bedford	7	94,502	15.4	60.7	8.2	23.6	7.5	2.3	10.6	3.4
Newton	11	83,346	9.7	75.2	3.3	6.2	15.3	1.7	7.6	3.6
Peabody	24	50,954	9.9	87.5	2.8	5.2	4.6	1.6	6.3	2.2
Pittsfield	28	43,949	11.3	78.1	8.0	10.5	3.0	0.4	7.5	3.0
Plymouth	20	54,781	13.3	91.2	1.1	2.7	4.9	0.7	6.3	2.9
Quincy	10	90,458	12.8	60.6	5.7	2.8	30.6	1.3	7.1	5.1
Revere	26	45,551	15.1	50.0	3.6	32.8	13.6	1.9	9.5	5.0
Somerville	13	75,372	11.4	61.8	7.9	15.8	14.5	1.2	7.5	3.0
Springfield	3	156,358	16.1	27.7	21.2	47.0	3.9	2.2	10.9	5.5
Taunton	19	56,348	13.9	80.6	7.9	5.4	6.0	1.9	8.6	2.1
Waltham	16	59,564	12.8	53.8	7.9	21.5	16.9	1.3	8.1	3.4
Weymouth	23	53,708	12.2	84.6	4.0	1.5	9.8	2.3	9.3	3.4
Worcester	2	179,839	14.4	58.9	12.7	19.3	9.1	1.3	7.7	4.9

Table B-6A (continued). Resident Birth Characteristics, 30 Largest Municipalities, Massachusetts: 2006

Municipality <sup>1</sup>	Birth				Deaths					
	Adequate Prenatal Care <sup>6</sup>		Public Payment <sup>7</sup> for Prenatal Care		Teen Mothers 15 to 19 years		Infant Mortality Rate <sup>8</sup>		Neonatal Mortality Rate <sup>8</sup>	
	%		%		n	Rate <sup>2</sup>	2006	2004-2006	2006	2004-2006
STATE TOTAL	83.1	34.2	32.2		4,722	21.3	4.8	4.9	3.6	3.7
Attleboro	80.8	21.6	28.1		27	23.8	3.3	4.3	3.3	3.8
Barnstable	86.2	47.4	33.4		29	21.3	-- <sup>5</sup>	2.9	-- <sup>5</sup>	1.4
Boston	82.2	48.1	46.6		568	28.7	5.8	5.6	4.4	4.4
Brockton	75.1	61.3	52.1		156	42.9	7.8	8.3	5.2	6.2
Brookline	92.3	4.5	6.1		4	-- <sup>5</sup>	-- <sup>5</sup>	2.5	-- <sup>5</sup>	2.0
Cambridge	87.1	17.8	16.1		32	8.2	5.2	3.7	4.4	2.8
Chicopee	80.3	50.0	46.8		58	33.4	1.6	4.9	1.6	2.7
Fall River	84.0	64.5	54.1		146	51.6	5.0	5.8	4.1	3.6
Framingham	84.7	41.4	28.2		65	33.3	3.1	5.8	2.1	4.5
Haverhill	87.0	31.5	37.6		73	38.3	6.6	4.6	5.5	3.5
Lawrence	76.6	67.6	66.4		244	80.6	6.2	7.6	4.1	5.5
Leominster	79.1	39.0	38.0		38	30.3	9.4	5.8	7.5	5.1
Lowell	68.5	55.1	52.1		202	50.9	5.0	5.5	4.4	3.7
Lynn	76.6	66.5	55.8		147	47.7	4.7	4.5	4.7	4.3
Malden	84.1	43.7	30.0		28	19.6	8.3	7.2	7.1	6.8
Medford	87.0	28.6	24.1		15	8.4	6.0	5.8	6.0	5.3
Methuen	84.5	28.0	30.0		29	21.9	1.7	3.4	1.7	1.1
New Bedford	76.2	54.9	60.6		207	70.0	8.9	6.9	6.2	4.5
Newton	87.5	9.1	7.5		8	2.3	3.7	4.1	3.7	4.1
Peabody	87.1	31.6	24.8		15	10.5	6.0	3.3	4.0	2.7
Pittsfield	66.0	56.6	52.4		63	49.6	-- <sup>5</sup>	3.2	-- <sup>5</sup>	1.9
Plymouth	88.4	21.9	23.7		30	17.9	5.5	4.3	1.4	1.9
Quincy	88.7	32.1	24.3		22	10.6	3.4	4.0	2.6	2.9
Revere	81.4	61.8	39.8		39	37.0	11.7	8.9	10.2	8.4
Somerville	82.3	40.7	29.0		34	15.7	4.6	4.6	3.5	3.8
Springfield	71.3	72.7	68.7		490	80.7	9.1	8.7	5.5	5.8
Taunton	78.4	42.1	43.5		53	32.5	6.4	5.7	5.1	3.5
Waltham	80.0	30.6	22.8		24	10.3	6.5	2.8	5.2	2.3
Weymouth	88.3	27.8	25.5		27	18.6	9.2	7.8	6.1	6.3
Worcester	73.0	48.5	48.7		242	34.4	5.0	8.5	3.9	6.7

NOTE: All percentages are calculated based on only those births with known values for the characteristic(s) of interest, unless otherwise stated.

1. The 30 largest municipalities are the cities and towns in Massachusetts with the largest populations according to DPH 2005 Massachusetts (Department of Public Health) Modified Age, Race/Ethnicity, & Sex Estimates 2005 (MMARS05), released October 2006. 2. Crude birth rates represent the number of births per 1,000 residents; teen birth rates refer to the number of births per 1,000 females ages 15-19. Birth rates for cities and towns were calculated using MDPH population estimates for 2005, which are the most up-to-date information available on the number of persons by age, race, and sex at the sub-state level. 3. For the category of Mother's Race and Ethnicity, percentages are calculated based on the state total of resident births, including births for which mother's race/Hispanic ethnicity is unknown. 4. Mothers who designated themselves as Asian, American Indian or Other. 5. Calculations based on values of 1-4 are excluded. 6. Based on the Adequacy of Prenatal Care Utilization (APNCU) Index. Please see Section Definitions for an explanation. 7. Public payment sources include Commonwealth, Healthy Start, Medicaid/MassHealth, and Medicare (may be HMO or managed care), or free care. 8. Deaths per 1,000 live births. See Definitions of Rates section in Section Definitions for definitions of infant and neonatal mortality rates.

Table B-6B. Resident Birth Characteristics by Community Health Network Areas (CHNAs), Massachusetts: 2006

CHNA	Population	Crude Birth Rate <sup>1</sup>	Mother's Race and Ethnicity				Very Low Birthweight (<1500 g) %	Low Birthweight (<2500 g) %
			White non-Hispanic % <sup>3</sup>	Black non-Hispanic % <sup>3</sup>	Hispanic % <sup>3</sup>	Asian or Other <sup>2</sup> % <sup>3</sup>		
STATE TOTAL	6,436,940	12.1	68.2	8.3	13.8	9.6	1.3	7.9
Community Health Network of Berkshire County	131,965	9.4	85.7	3.8	6.2	3.9	1.2	8.1
Upper Valley Health Web (Franklin County)	88,506	9.8	89.9	1.0	4.1	3.7	0.9	5.9
Partnership for Health in Hampshire County (Northampton)	151,801	8.0	83.9	2.0	6.7	7.4	0.5	5.9
The Community Health Connection (Springfield)	299,490	12.7	48.5	14.6	32.6	4.2	1.8	9.6
Community Health Network of Southern Worcester County	119,141	11.1	88.9	1.5	7.2	2.3	1.1	6.9
Community Partners for Health (Milford)	160,521	13.2	90.2	1.2	3.8	4.5	1.5	8.6
Community Health Network of Greater Metro West (Framingham)	379,658	12.8	79.7	2.6	6.9	10.7	0.9	7.4
Community Wellness Coalition (Worcester)	303,669	13.1	67.4	8.7	13.3	10.6	1.1	7.3
Fitchburg/Gardner Community Health Network	261,369	11.8	79.8	3.6	11.4	5.1	1.3	6.5
Greater Lowell Community Health Network	272,893	13.4	65.3	4.6	10.7	19.3	1.3	8.2
Greater Lawrence Community Health Network	195,176	13.7	42.1	2.2	48.7	6.9	1.1	7.4
Greater Haverhill Community Health Network	148,557	12.2	84.8	2.5	9.3	3.4	1.8	9.4
Community Health Network North (Beverly/Gloucester)	119,378	9.4	92.3	1.1	2.4	4.3	0.9	8.4
North Shore Community Health Network	287,352	12.0	61.4	6.8	25.2	6.6	1.3	7.5
Greater Woburn/Concord/Littleton Community Health Network	209,597	10.0	78.1	2.1	3.7	16.0	0.9	6.5
North Suburban Health Alliance (Medford/Malden/Melrose)	257,235	12.8	68.3	9.4	8.9	13.4	1.8	7.6
Greater Cambridge/Somerville Community Health Network	273,883	11.8	67.3	8.2	8.3	16.1	1.1	7.1
West Suburban Health Network (Newton/Waltham)	253,138	10.8	73.9	3.7	9.4	13.0	1.2	7.8
Alliance for Community Health (Boston/Chelsea/Revere/Winthrop)	711,603	14.3	37.9	23.2	25.1	13.8	1.5	8.7
Blue Hills Community Health Alliance (Greater Quincy)	372,309	11.6	72.2	8.4	2.7	16.6	1.4	7.7
Four (For) Communities (Holyoke, Chicopee, Ludlow, Westfield)	161,454	11.9	64.5	2.8	30.3	2.3	1.7	7.0
Greater Brockton Community Health Network	242,404	12.9	61.2	22.4	7.5	8.8	1.9	9.8
South Shore Community Partners in Prevention (Plymouth)	188,787	11.4	94.4	1.1	1.5	2.9	0.9	7.5
Greater Attleboro-Taunton Health & Education Response	252,919	12.3	86.2	4.3	3.7	5.6	1.5	7.8
Partners for a Healthier Community (Fall River)	141,977	11.7	83.7	4.1	7.6	4.5	1.3	9.2
Greater New Bedford Health & Human Services Coalition	199,955	11.9	72.7	5.6	15.0	6.6	2.0	9.6
Cape and Islands Community Health Network	252,204	8.8	85.7	4.2	4.3	5.3	0.9	6.9



Table B-6B (continued) Resident Birth Characteristics, Community Health Network Areas (CHNAs), Massachusetts: 2006

CHNA	Births				Deaths			
	Adequate Prenatal Care <sup>6</sup> %	Public Payment <sup>7</sup> for Prenatal Care %	Unmarried %	Teen Mothers 15 to 19 years n	Infant Mortality Rate <sup>8</sup> 2006	2004-2006	Neonatal Mortality Rate <sup>8</sup> 2006	2004-2006
STATE TOTAL	83.1	34.2	32.2	4,722	21.3	4.8	4.9	3.6
Community Health Network of Berkshire County	76.3	50.5	45.8	24.5	-- <sup>5</sup>	-- <sup>5</sup>	3.7	-- <sup>5</sup>
Upper Valley Health Web (Franklin County)	86.5	39.1	36.6	25.1	1.1	1.1	4.7	1.1
Partnership for Health in Hampshire County (Northampton)	86.3	26.9	26.6	7.3	1.7	1.7	2.5	1.7
The Community Health Connection (Springfield)	74.8	58.4	53.9	53.4	7.1	7.1	7.2	4.5
Community Health Network of Southern Worcester County	82	27.6	33.6	25.4	4.5	4.5	6.1	3.8
Community Partners for Health (Milford)	88	16.3	17.3	12.3	1.9	1.9	3.6	1.9
Community Health Network of Greater Metro West (Frammingham)	86.1	19.2	15.8	13.4	3.3	3.3	4.1	2.7
Community Wellness Coalition (Worcester)	76.6	35.1	36.4	25.7	6.3	6.3	7.1	4.3
Fitchburg/Gardner Community Health Network	81.6	32.5	32.4	25.7	4.2	4.2	4.8	3.6
Greater Lowell Community Health Network	75.7	33.5	33.4	27.2	4.6	4.6	4.4	3.8
Greater Lawrence Community Health Network	80.7	44.9	45.4	42.2	4.5	4.5	5.5	3
Greater Haverhill Community Health Network	89	22.9	27.7	24.1	5.5	5.5	4.4	5
Community Health Network North (Beverly/Gloucester)	92.3	22.2	17.5	8.7	2.7	2.7	2.3	2
North Shore Community Health Network	81.9	43.3	36.4	23.2	3.8	3.8	4	3.8
Greater Woburn/Concord/Littleton Community Health Network	86.4	8.8	10.7	5	4.3	4.3	3.3	4.3
North Suburban Health Alliance (Medford/Malden/Melrose)	86	32.2	24.7	13.2	6.1	6.1	4.9	4.8
Greater Cambridge/Somerville Community Health Network	86.8	21.1	16.5	9.5	3.4	3.4	3.7	2.8
West Suburban Health Network (Newton/Waltham)	86	13.9	11.8	3.8	2.6	2.6	2.4	2.6
Alliance for Community Health (Boston/Chelsea/Revere/Winthrop)	82.6	47.9	44.2	29.3	5.5	5.5	5.7	4.3
Blue Hills Community Health Alliance (Greater Quincy)	87.6	22.5	19.9	9.3	3.9	3.9	4.7	2.8
Four (For) Communities (Holyoke, Chicopee, Ludlow, Westfield)	81.1	52.3	48.6	43.6	6.7	6.7	6.9	6.2
Greater Brockton Community Health Network	81.1	41	37.6	23.4	5.1	5.1	5.9	3.5
South Shore Community Partners in Prevention (Plymouth)	89.4	18.7	20.7	12.5	6.5	6.5	5.1	4.2
Greater Attleboro-Taunton Health & Education Response	82.1	24.5	27.5	18.3	1.9	1.9	3.6	2.9
Partners for a Healthier Community (Fall River)	86.2	55.5	46.2	36.9	4.2	4.2	6	3.6
Greater New Bedford Health & Human Services Coalition	80.7	44.4	49.5	39.6	5.9	5.9	5.9	3.9
Cape and Islands Community Health Network	85.2	37.6	31.2	19.4	3.6	3.6	3.8	1.8

NOTE: All percentages are calculated based on only those births with known values for the characteristic(s) of interest, unless otherwise stated.

1. Births per 1,000 residents (male and female). 2005 rates are calculated using Massachusetts (Department of Public Health) Modified Age, Race/Ethnicity, & Sex Estimates 2005 (MMARS05), released October, 2006. 2. Mothers who designated themselves as Asian, American Indian or Other. 3. For the category of Mother's Race and Ethnicity, percentages are calculated based on the state total of resident births, including births for which mother's race/Hispanic ethnicity is unknown. 4. Births per 1,000 female residents ages 15-19. Birth rates for cities and towns were calculated using MDPH population estimates for 2005, which are the most up-to-date information available on the number of persons by age, race, and sex at the sub-state level. 5. Calculations based on values of 1-4 are excluded. 6. Based on the Adequacy of Prenatal Care Utilization (APNCU) Index. Please see Section Definitions for an explanation. 7. Public payment sources include Commonwealth, Healthy Start, Medicaid/MassHealth, and Medicare (may be HMO or managed care), or free care. 8. Deaths per 1,000 live births. See Section Definitions for definitions of infant and neonatal mortality rates.



**Table B-7. Age-Specific and Crude Birth Rates, Massachusetts: 1990 and 2006**

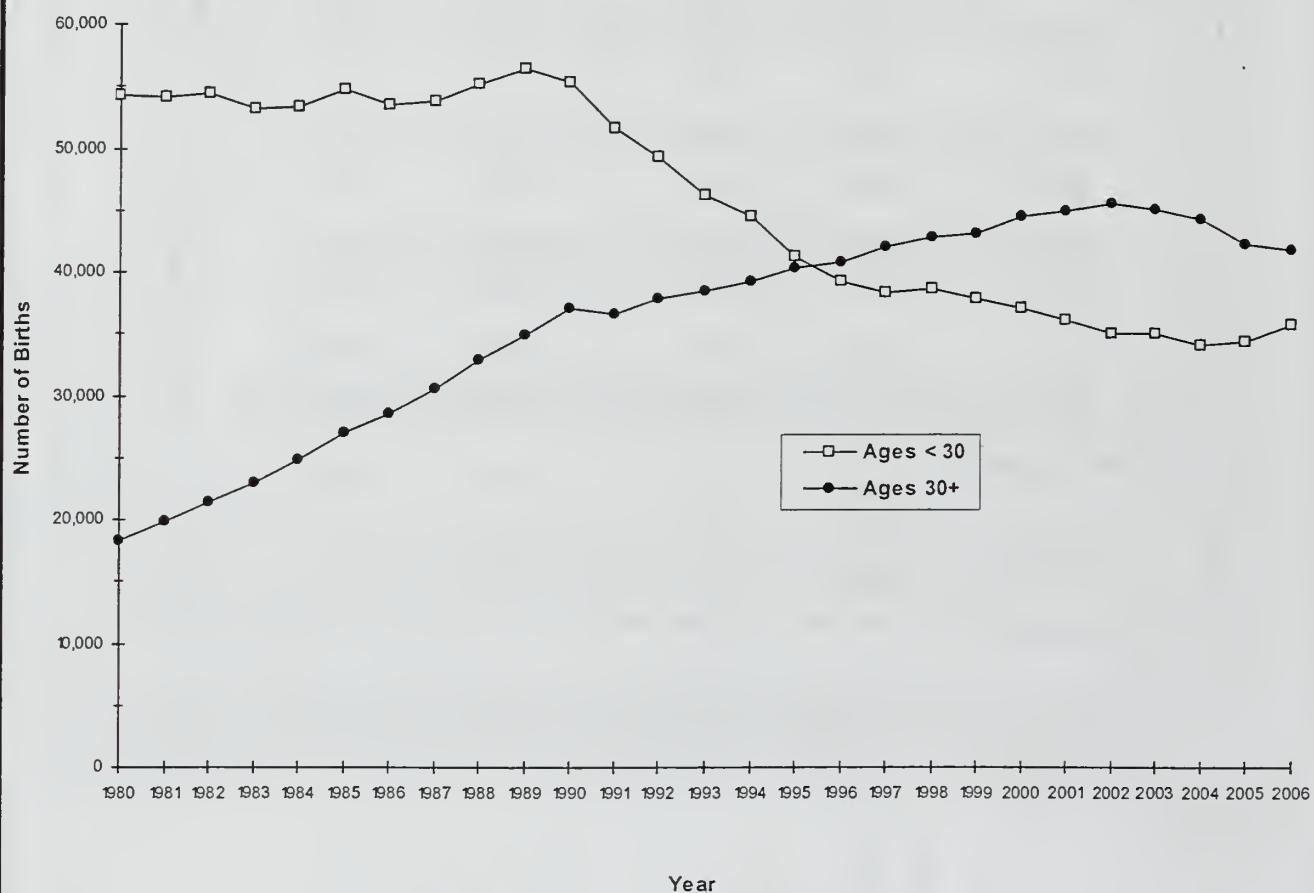
Mother's Age	1990		2006		Percent Change in Rate
	Births <sup>1</sup>	Rate	Births	Rate <sup>2</sup>	
10-14	124	1.3	56	0.3	-78.5
15-19	7,258	35.1	4,722	21.3	-39.2
20-24	18,115	69.5	12,420	55.2	-20.6
25-29	29,913	107.2	18,633	90.0	-16.1
30-34	25,687	93.9	23,611	113.7	21.1
35-39	9,795	40.1	14,749	61.4	53.0
40-44	1,522	6.9	3,256	12.3	78.8
45+ <sup>3</sup>	46	0.3	213	0.2	-48.3
Birth rate, ages 15-44 <sup>4</sup>	92,290	62.2	77,391	56.7	-8.9
Crude Birth Rate <sup>5</sup>	92,461	15.4	77,670	12.1	-21.7

NOTE: All percentages are calculated based on only those births with known values for the characteristic(s) of interest, unless otherwise stated.

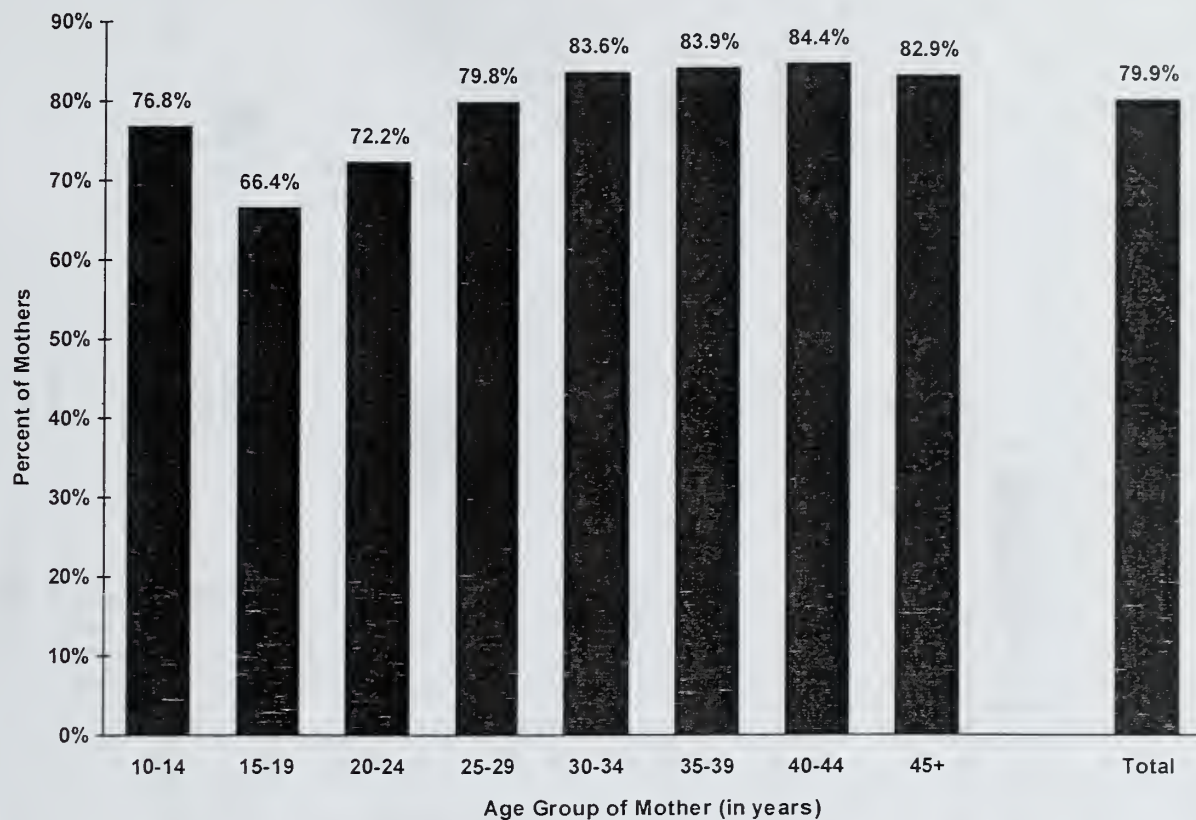
1. Differences in the number of births from previous publications are the result of updated birth files. The number of births for all age groups does not always add to the total number of births as mother's age is sometimes not recorded on the birth certificate.

2. Population estimates from the National Center for Health Statistics for 2006 were used to calculate birth rates at the state level. 3. Denominator is female population ages 45-49. 4. Rate represents the total number of births to women ages 15-44 per 1,000 women ages 15 to 44. 5. Births per 1,000 residents (male and female). Includes births to mothers of all age groups and mothers for whom age is unknown.

Figure B-4. Trends in the Number of Births by Mother's Age Group, Massachusetts: 1980-2006



**Figure B-5. Percent of Mothers Breastfeeding or Intending to Breastfeed<sup>1</sup>  
by Age Group<sup>2</sup>, Massachusetts: 2006**

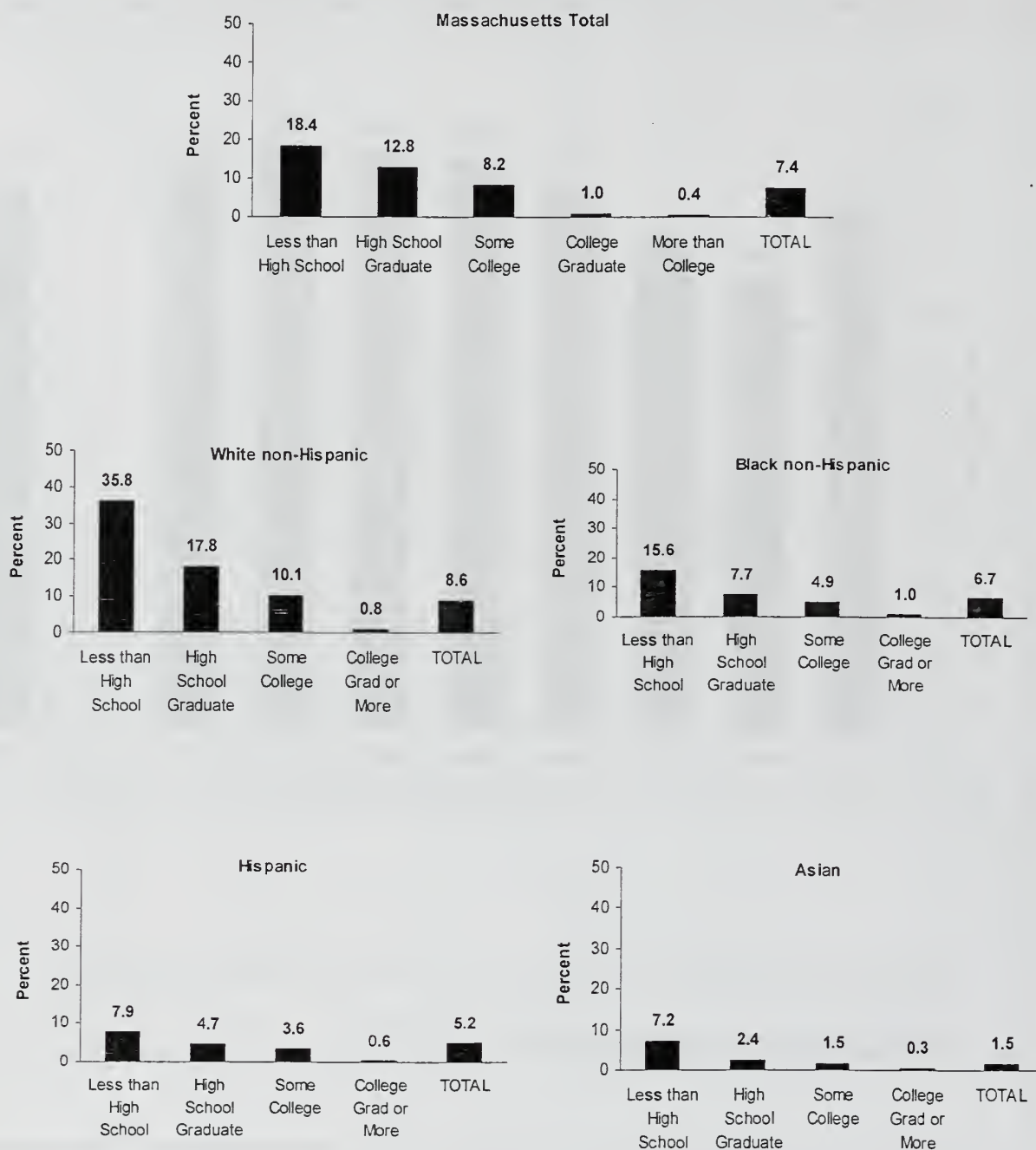


NOTE: All percentages are calculated based on only those births with known values for the characteristic(s) of interest, unless otherwise stated.

1. Information about breastfeeding is reported by the mother at the time of the birth.

2. For race-specific breastfeeding rates see Table B-5A.

**Figure B-6. Percent of Mothers who Smoked During Pregnancy<sup>1</sup> by Mother's Race and Hispanic Ethnicity and Educational Attainment, Massachusetts: 2006**

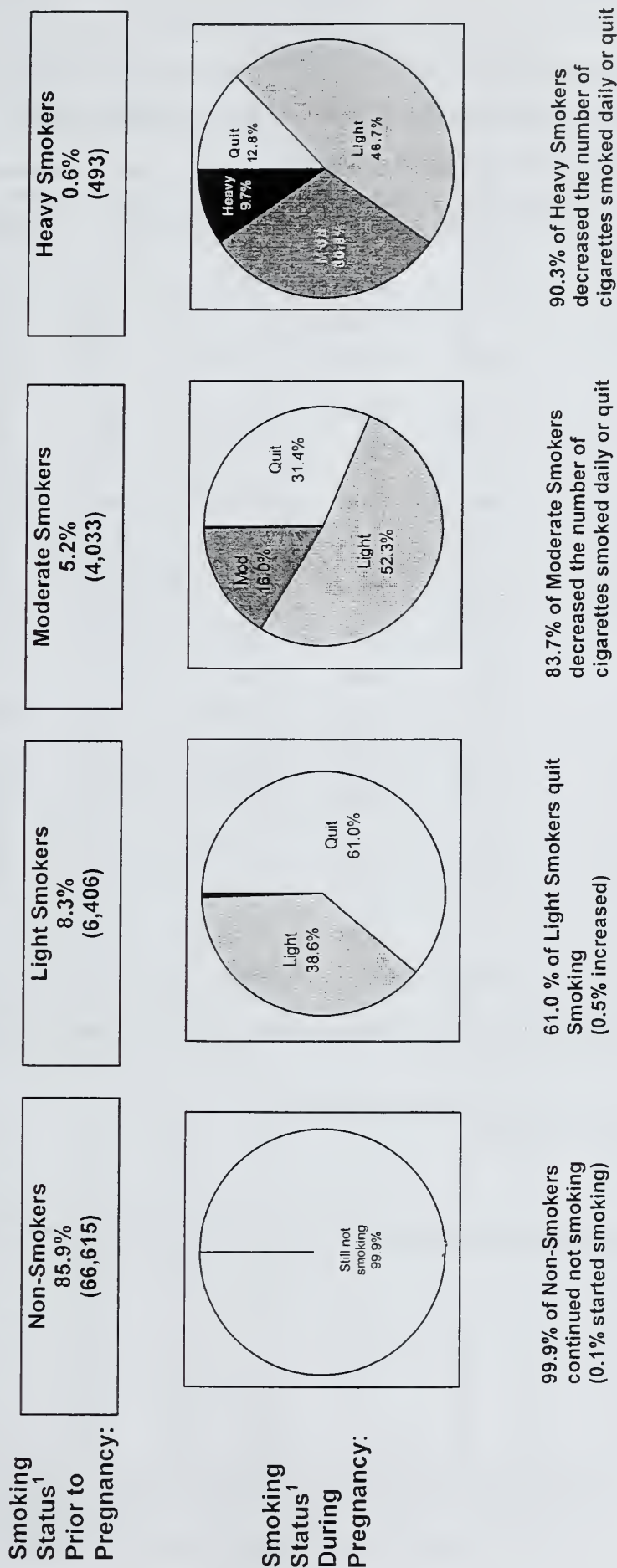


NOTE: All percentages are calculated based on only those births with known values for the characteristic(s) of interest, unless otherwise stated.

1. Based on information provided on parent worksheet. Because smoking is self-reported, data on smoking prevalence should be interpreted cautiously. Mothers with multiples are counted for each birth. Caution should be used with Asian data because of small numbers.



Figure B-7. Distribution of Smoking Status<sup>1</sup> during Pregnancy by Smoking Status Prior to Pregnancy, Massachusetts: 2006



NOTE: All percentages are calculated based on only those births with known values for the characteristic(s) of interest, unless otherwise stated.

1. Light Smokers=1-10 cigarettes daily; Moderate Smokers=11-20 cigarettes daily; Heavy Smokers=21 cigarettes or more daily.

Table B-8. Parity<sup>1</sup> by Age of Mother, Massachusetts: 2006

Age of Mother		Total Births	1st	2nd	3rd	4th	5th+
STATE TOTAL	n <sup>2</sup>	77,670	34,466	26,818	10,851	3,578	1,819
	% <sup>3</sup>	100.0	44.5	34.6	14.0	4.6	2.3
10-14	n	56	56	0	0	0	0
	%	100.0	100.0	0.0	0.0	0.0	0.0
15-19	n	4,722	4,064	581	63	7	0
	%	100.0	86.2	12.3	1.3	0.1	0.0
20-24	n	12,420	7,096	3,856	1,100	278	69
	%	100.0	57.2	31.1	8.9	2.2	0.6
25-29	n	18,633	8,969	6,093	2,348	838	356
	%	100.0	48.2	32.8	12.6	4.5	1.9
30-34	n	23,611	9,282	9,188	3,514	1,035	551
	%	100.0	39.4	39.0	14.9	4.4	2.3
35-39	n	14,749	4,067	5,860	3,093	1,093	603
	%	100.0	27.6	39.8	21.0	7.4	4.1
40-44	n	3,256	854	1,173	697	310	215
	%	100.0	26.3	36.1	21.5	9.5	6.6
45+	n	213	71	65	36	17	24
	%	100.0	33.3	30.5	16.9	8.0	11.3

NOTE: All percentages are calculated based on only those births with known values for the characteristic(s) of interest, unless otherwise stated.

1. The number of live births including this birth. 2. State totals include births of unknown parity and unknown mother's age. 3. Percents may not sum to 100.0 due to rounding.

**Table B-9. Trends in Number and Percent Distribution of Births<sup>1</sup> by Plurality and Age  
Massachusetts: 1993-2006**

		Singletons		Multiples <sup>2</sup>						Total births	
				Twins		Triplets or more		Total Multiples			
Age Group	Year	n	%	n	%	n	%	n	%	n	%
<b>All Ages</b>											
	1993	82,055	97.0	2,367	2.8	205	0.2	2,572	3.0	84,627	100.0
	1994	81,187	96.9	2,357	2.8	214	0.3	2,571	3.1	83,758	100.0
	1995	78,935	96.8	2,429	3.0	198	0.2	2,627	3.2	81,562	100.0
	1996	77,355	96.5	2,621	3.3	194	0.2	2,815	3.5	80,164	100.0
	1997	77,203	96.1	2,856	3.6	262	0.3	3,118	3.9	80,321	100.0
	1998	78,004	95.8	3,114	3.8	288	0.4	3,402	4.2	81,406	100.0
	1999	77,473	95.8	3,147	3.9	246	0.3	3,393	4.2	80,866	100.0
	2000	78,075	95.7	3,263	4.0	244	0.3	3,507	4.3	81,582	100.0
	2001	77,409	95.6	3,371	4.2	234	0.3	3,605	4.4	81,014	100.0
	2002	76,673	95.1	3,708	4.6	243	0.3	3,951	4.9	80,624	100.0
	2003	76,367	95.3	3,551	4.4	249	0.3	3,800	4.7	80,167	100.0
	2004	74,677	95.2	3,538	4.5	245	0.3	3,783	4.8	78,460	100.0
	2005	73,258	95.4	3,375	4.4	190	0.2	3,565	4.6	76,824	100.0
	2006	74,146	95.5	3,375	4.3	149	0.2	3,524	4.5	77,670	100.0
<b>Ages &lt;35</b>											
	1993	70,042	97.2	1,849	2.6	158	0.2	2,007	2.8	72,049	100.0
	1994	68,644	97.2	1,844	2.6	164	0.2	2,008	2.8	70,652	100.0
	1995	65,669	97.2	1,787	2.6	141	0.2	1,928	2.9	67,597	100.0
	1996	63,560	96.9	1,935	2.9	126	0.2	2,061	3.1	65,621	100.0
	1997	62,598	96.7	1,949	3.0	170	0.3	2,119	3.3	64,717	100.0
	1998	62,719	96.4	2,193	3.4	170	0.3	2,363	3.6	65,082	100.0
	1999	61,816	96.4	2,147	3.3	150	0.2	2,297	3.6	64,113	100.0
	2000	61,659	96.4	2,205	3.4	130	0.2	2,335	3.6	63,994	100.0
	2001	60,704	96.3	2,211	3.5	134	0.2	2,345	3.7	63,049	100.0
	2002	59,736	96.0	2,379	3.8	127	0.2	2,506	4.0	62,242	100.0
	2003	59,347	95.9	2,389	3.9	118	0.2	2,507	4.1	61,854	100.0
	2004	57,618	96.0	2,229	3.7	142	0.2	2,371	4.0	59,989	100.0
	2005	56,380	96.3	2,086	3.6	102	0.2	2,188	3.7	58,569	100.0
	2006	57,237	96.3	2,116	3.6	89	0.1	2,205	3.7	59,442	100.0
<b>Ages 35+</b>											
	1993	12,007	95.5	518	4.1	47	0.4	565	4.5	12,572	100.0
	1994	12,543	95.7	513	3.9	50	0.4	563	4.3	13,106	100.0
	1995	13,264	95.0	642	4.6	57	0.4	699	5.0	13,963	100.0
	1996	13,793	94.8	686	4.7	68	0.5	754	5.2	14,547	100.0
	1997	14,602	93.6	907	5.8	92	0.6	999	6.4	15,601	100.0
	1998	15,282	93.6	921	5.6	118	0.7	1,039	6.4	16,321	100.0
	1999	15,657	93.5	1,000	6.0	96	0.6	1,096	6.5	16,753	100.0
	2000	16,412	93.3	1,058	6.0	114	0.6	1,172	6.7	17,584	100.0
	2001	16,703	93.0	1,160	6.5	100	0.6	1,260	7.0	17,963	100.0
	2002	16,936	92.1	1,329	7.2	116	0.6	1,445	7.9	18,381	100.0
	2003	17,015	92.9	1,162	6.3	131	0.7	1,293	7.1	18,308	100.0
	2004	17,055	92.4	1,309	7.1	103	0.6	1,412	7.6	18,467	100.0
	2005	16,874	92.5	1,289	7.1	88	0.5	1,377	7.5	18,251	100.0
	2006	16,901	92.8	1,257	6.9	60	0.3	1,317	7.2	18,218	100.0

NOTE: All percentages are calculated based on only those births with known values for the characteristic(s) of interest, unless otherwise stated.

1. Differences in the number of births from previous publications are the result of updated files. 2. Numbers of multiples (n) represent individual infants rather than sets of infants.

Table B-10. Selected Birth Characteristics by Maternal Education, Massachusetts: 2006

	<u>Less than High School</u>		<u>High School Graduate</u>		<u>Some College</u>		<u>College Graduate</u>		<u>More than College</u>	
	n	% <sup>1</sup>	n	% <sup>1</sup>	n	% <sup>1</sup>	n	% <sup>1</sup>	n	% <sup>1</sup>
State Total	8,234	10.6	20,362	26.3	16,700	21.6	20,204	26.1	11,977	15.5
<b>Race</b>										
White non-Hispanic	2,847	5.4	12,040	22.8	11,745	22.2	16,474	31.2	9,772	18.5
Black non-Hispanic	859	13.3	2,486	38.6	1,907	29.6	930	14.4	256	4.0
Hispanic	3,681	34.4	4,094	38.3	1,886	17.6	701	6.6	328	3.1
Asian	511	9.4	962	17.6	738	13.5	1,799	32.9	1,450	26.6
<b>Age</b>										
20-29	4,232	13.7	11,382	36.7	8,215	26.5	5,333	17.2	1,819	5.9
30-39	1,483	3.9	6,321	16.5	7,514	19.6	13,683	35.8	9,265	24.2
40+	139	4.0	616	17.8	640	18.5	1,168	33.8	890	25.8
Non-U.S.-born <sup>2</sup>	3,487	42.4	6,391	31.4	3,726	22.3	4,451	22.0	2,829	23.6
Unmarried	6,127	74.4	11,119	54.6	5,814	34.8	1,481	7.3	375	3.1
Publicly-financed prenatal care	6,854	84.7	12,099	60.3	5,243	32.9	1,486	7.4	294	2.5
Very low birthweight <sup>3</sup>	110	1.3	359	1.8	231	1.4	228	1.1	91	0.8
Low birthweight <sup>4</sup>	759	9.2	1,830	9.0	1,355	8.1	1,372	6.8	793	6.6
Adequate prenatal care <sup>5</sup>	5,591	69.3	15,751	78.2	13,911	84.6	17,775	88.5	10,656	89.4
Cesarean section delivery	2,099	25.5	6,323	31.1	5,934	35.7	7,245	35.9	4,226	35.3
Breastfeeding <sup>6</sup>	5,451	66.8	14,481	71.8	12,380	77.2	17,751	88.4	10,942	91.9
Multiple births	191	2.3	681	3.3	758	4.5	1,147	5.7	733	6.1
Smoking during pregnancy	1,516	18.4	2,601	12.8	1,376	8.2	197	1.0	45	0.4

NOTE: All percentages are calculated based on only those births with known values for the characteristic(s) of interest, unless otherwise stated.

1. For state total, race and age categories, percentages are based on row totals. For all other categories, percentages are based on state column totals. 2. Includes women born outside of the 50 U.S. States, Washington D.C., and Puerto Rico/U.S. territories (the U.S. Virgin Islands, and Guam). 3. Very low birthweight: less than 1,500 grams or 3.3 pounds. 4. Low birthweight: less than 2,500 grams or 5.5 pounds. 5. Beginning with the 2001 publication, the Adequacy of Prenatal Care Utilization Index has replaced the Kessner Index as the measure of adequate prenatal care. 6. Mother was breastfeeding or was intending to breastfeed at the time the birth certificate was completed.



**Table B-11. Inter-pregnancy Interval<sup>1</sup> (IPI) and Birth Outcomes -- Pregnancies to Multiparous<sup>2</sup> Mothers, Massachusetts: 2006**

IPI (months)   Pregnancies			Birth Weight (BW)				Gestational Age (GA)			
			Low (<2,500 g)		Very Low (<1,500 g)		Preterm <sup>3</sup> (<37 wk)		Very Early <sup>4</sup> (<28 wk)	
			n	%LBW	n	%VLBW	n	%Preterm	n	%VEGA
<b>State Total</b>		41,024	2,365	5.8%	363	0.9%	3,001	7.3%	176	0.4%
<b>&lt;6</b>		1,813	139	7.7%	24	1.3%	170	9.4%	14	0.8%
<b>6-11</b>		4,697	211	4.5%	38	0.8%	324	6.9%	20	0.4%
<b>12-17</b>		5,913	260	4.4%	36	0.6%	368	6.2%	17	0.3%
<b>18-23</b>		5,260	241	4.6%	31	0.6%	342	6.5%	13	0.2%
<b>24-29</b>		4,439	214	4.8%	30	0.7%	291	6.6%	11	0.2%
<b>30-35</b>		3,341	172	5.1%	17	0.5%	219	6.6%	7	0.2%
<b>36-41</b>		2,472	141	5.7%	28	1.1%	149	6.0%	13	0.5%
<b>42-47</b>		1,955	113	5.8%	19	1.0%	150	7.7%	12	0.6%
<b>48+</b>		11,134	874	7.9%	140	1.3%	988	8.9%	69	0.6%
<b>Short</b>	<b>0-11</b>	6,510	350	5.4%	62	0.7%	494	27.3%	34	1.9%
	<b>12-35</b>	18,953	887	4.7%	114	0.6%	1,220	67.3%	48	2.6%
	<b>36+</b>	15,561	1,128	7.3%	187	1.2%	1,287	71.0%	94	5.2%

1. Interpregnancy Interval (IPI) is the time in months between the date of last menstrual period of current pregnancy and the date of previous live birth. 2. Multiparous is defined as having given birth two or more times. 3. Also known as premature delivery. 4. Very early gestational age (VEGA) refers to birth delivery before 28 weeks of gestational age and is also known as *extremely preterm* delivery.

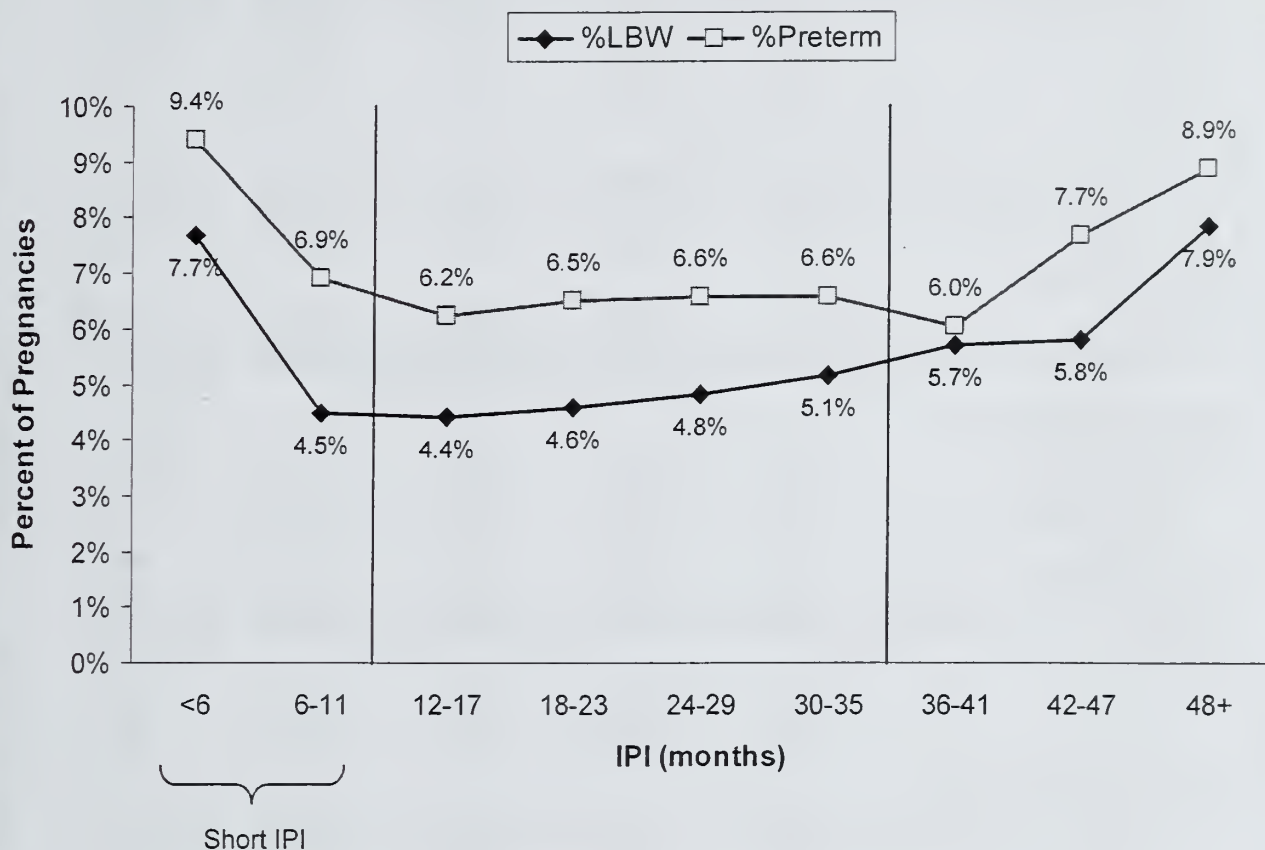
**Table B-12. Inter-pregnancy Interval<sup>1</sup> (IPI) by Maternal Characteristics Pregnancies to Multiparous Mothers<sup>2</sup>, Massachusetts: 2006**

	Total Pregnancies Parity >1		IPI					
			Short					
	n	%	< 12 months		12-35 months		36+ months	
	n	%	n	%	n	%	n	%
<b>State Total<sup>3</sup></b>	<b>41,024</b>	<b>100%</b>	<b>6,510</b>	<b>15.9%</b>	<b>18,953</b>	<b>46.2%</b>	<b>15,561</b>	<b>37.9%</b>
<b>Age</b>								
< 20	606	1.5%	282	46.5%	284	46.9%	40	6.6%
20-34	27,975	68.2%	4,692	16.8%	13,034	46.6%	10,249	36.6%
35pls	12,443	30.3%	1,536	12.3%	5,635	45.3%	5,272	42.4%
<b>Race Ethnicity</b>								
White non-Hispanic	27,578	67.2%	4,556	16.5%	14,054	51.0%	8,968	32.5%
Black non-Hispanic	3,593	8.8%	526	14.6%	1,174	32.7%	1,893	52.7%
Hispanics	6,177	15.1%	918	14.9%	2,139	34.6%	3,120	50.5%
Asian non-Hispanic	2,659	6.5%	354	13.3%	1,210	45.5%	1,095	41.2%
<b>Education</b>								
High School or less	15,591	38.0%	2,384	15.3%	5,782	37.1%	7,425	47.6%
BA or Assoc	19,552	47.7%	3,137	16.0%	9,562	48.9%	6,853	35.1%
More than college	5,820	14.2%	980	16.8%	3,580	61.5%	1,260	21.6%
<b>Delivery Payment Source</b>								
Public	14,290	34.8%	2,306	16.1%	5,114	35.8%	6,870	48.1%
Private	25,643	62.5%	4,028	15.7%	13,313	51.9%	8,302	32.4%
<b>Region of Residence</b>								
Western MA	4,934	12.0%	783	15.9%	2,229	45.2%	1,922	39.0%
Central MA	5,555	13.5%	925	16.7%	2,604	46.9%	2,026	36.5%
Northeast MA	8,498	20.7%	1,374	16.2%	3,805	44.8%	3,319	39.1%
Metrowest MA	8,905	21.7%	1,371	15.4%	4,763	53.5%	2,771	31.1%
Southeast MA	8,069	19.7%	1,321	16.4%	3,561	44.1%	3,187	39.5%
Boston Region	5,063	12.3%	736	14.5%	1,991	39.3%	2,336	46.1%
<b>Town of Residence<sup>4</sup></b>			<b>Top 10</b>		<b>Top 10</b>		<b>Top 10</b>	
			Fitchburg (20.5%)		Needham (64.1%)		Everett (56.2%)	
			Weymouth (20.2%)		Arlington (61.5%)		Chelsea (55.4%)	
			Barnstable (19.1%)		Natick (59.6%)		Randolph (54.0%)	
			Low ell (18.7%)		Brookline (56.0%)		Lynn (50.4%)	
			Law rence (18.4%)		Franklin (54.8%)		Taunton (50.3%)	
			Haverhill (18.2%)		Plymouth (53.7%)		Lawrence (48.9%)	
			Holyoke (18.0%)		Newton (53.6%)		Brockton (48.4%)	
			Worcester (17.9%)		North Attleboro (52.9%)		New Bedford (48.2%)	
			Medford (17.6%)		Cambridge (52.7%)		Revere (48.0%)	
			Chicopee (17.4%)		Shrewsbury (51.6%)		Boston (46.6%)	

1. Inter-pregnancy Interval (IPI) is the time in months between the date of last menstrual period of current pregnancy and the date of previous live birth. 2. Multiparous is defined as having given birth two or more times. 3. State total includes pregnancies with known IPI.

4. Among towns with at least 200 mothers giving birth to their 2<sup>nd</sup> or later child.

**Figure B-8. Inter-pregnancy Interval (IPI)<sup>1</sup> vs. LBW<sup>2</sup> and Preterm<sup>3</sup> Pregnancies to Multiparous Mothers<sup>4</sup>, Massachusetts: 2006**



**NOTE:** Short IPIs (less than 12 months) and IPIs over 35 months were associated with higher proportions of low birthweight and premature deliveries.

Percentages are calculated based on pregnancies to mothers who gave birth to their 2<sup>nd</sup> or later child in 2006 and with known values for the characteristic(s) of interest, unless otherwise stated.

1. Inter-pregnancy Interval (IPI) is the time in months between the date of last menstrual period of current pregnancy and the date of previous live birth. 2. Low birthweight: less than 2,500 grams or 5.5 pounds. 3. Preterm delivery is defined as gestational age less than 37 weeks. It is also known as premature delivery. 4. Multiparous is defined as having given birth two or more times.



**Table B-13. Summary of Selected Teen Birth Characteristics, Massachusetts: 2006**

	Ages 15-17		Ages 18-19		Combined Ages 15-19	
	N	% <sup>1</sup>	N	% <sup>1</sup>	N	% <sup>1</sup>
State total	1,379	29.2%	3,343	70.8%	4,722	100.0%
<b>Maternal Demographics</b>						
Race/Hispanic Ethnicity	N	% <sup>2</sup>	N	% <sup>2</sup>	N	% <sup>2</sup>
White non-Hispanic	509	36.9%	1,596	47.8%	2,105	44.6%
Black non-Hispanic	202	14.6%	405	12.1%	607	12.9%
Asian	62	4.5%	84	2.5%	146	3.1%
Hispanic	558	40.5%	1,121	33.6%	1,679	35.6%
Other	48	3.5%	135	4.0%	183	3.9%
<b>Birthplace</b>						
U.S. States / D.C.	1,086	78.8%	2,561	76.6%	3,647	77.3%
Puerto Rico / US Terr.	126	9.1%	251	7.5%	377	8.0%
Non-U.S.-born	166	12.0%	531	15.9%	697	14.8%
<b>Prenatal care funding</b>						
Public	1,031	75.8%	2,599	79.0%	3,630	78.1%
Private, other	330	24.2%	690	21.0%	1,020	21.9%
<b>Pregnancy-Related Factors</b>						
<b>Adequacy of Prenatal Care<sup>3</sup></b>						
Adequate Total <sup>4</sup>	911	67.1%	2,356	71.1%	3,267	69.9%
Adequate Intensive	420	30.9%	1,081	32.6%	1,501	32.1%
Adequate Basic	491	36.2%	1,275	38.5%	1,766	37.8%
Intermediate	126	9.3%	320	9.7%	446	9.5%
Inadequate/None	321	23.6%	639	19.3%	960	20.5%
Unknown	21	1.5%	28	0.8%	49	1.0%
<b>Parity<sup>6</sup></b>						
1	1,291	93.7%	2,773	83.1%	4,064	86.2%
2	84	6.1%	497	14.9%	581	12.3%
3+	3	-- <sup>5</sup>	67	2.0%	70	1.5%
<b>Smoking during Pregnancy</b>						
Yes	145	10.5%	488	14.6%	633	13.4%
No	1,232	89.5%	2,850	85.4%	4,082	86.6%
<b>Birth Outcomes</b>						
<b>Birthweight</b>						
< 500 g	8	0.6%	7	0.2%	15	0.3%
500-1,499 g	21	1.5%	33	1.0%	54	1.1%
1,500-2,499 g	125	9.1%	253	7.6%	378	8.0%
LBW (<2,499 g)	154	11.2%	293	9%	447	9.5%
2,500-3,999 g	1,158	84.0%	2,869	85.9%	4,027	85.4%
4000+ g	66	4.8%	176	5.3%	242	5.1%
<b>Gestational age</b>						
< 28 weeks	17	1.2%	21	0.6%	38	0.8%
< 37 weeks	132	9.6%	285	8.5%	417	8.8%
37-42 weeks	1,244	90.4%	3,050	91.4%	4,294	91.1%
43+ weeks	0	0.0%	3	-- <sup>5</sup>	3	-- <sup>5</sup>
<b>Plurality</b>						
Singleton	1,359	98.5%	3,281	98.1%	4,640	98.3%
Multiple birth	20	1.5%	62	1.9%	82	1.7%

NOTE: All percentages are calculated based on only those births with known values for the characteristic(s) of interest, unless otherwise stated.

1. For state total row, percentages are based on total births to women ages 15-19. For the rest of the table, percentages are based on births for a given age group and characteristic. 2. Percents are based on state total of the age group. 3. Based on Adequacy of Prenatal Care Utilization (APNCU) Index. 4. Adequate Total = Adequate Basic + Adequate Intensive. 5. Calculations based on values of 1-4 are excluded. 6. Number of live births including the current birth.



**Table B-14. Trends in Teen Birth Rates for Selected Communities<sup>1</sup>, Ranked by 2006 Teen Birth Rate<sup>2</sup>, Massachusetts: 1996, 2005, and 2006**

2006 Rank	Municipality	1996 <sup>3</sup>		2005		2006	
		Number of Teen Births	Teen Birth Rate	Number of Teen Births	Teen Birth Rate	Number of Teen Births	Teen Birth Rate <sup>4</sup>
	<b>State Total</b>	<b>5,757</b>	<b>28.5</b>	<b>4,539</b>	<b>21.7</b>	<b>4,722</b>	<b>21.3</b>
1	Holyoke	188	129.2	146	96.8	143	94.8
2	Springfield	479	88.3	435	71.6	490	80.7
3	Lawrence	278	108.5	217	71.7	244	80.6
4	Chelsea	91	102.4	75	75.0	79	79.0
5	New Bedford	216	71.5	174	58.9	207	70.0
6	Southbridge	38	68.8	36	64.5	36	64.5
7	Fitchburg	100	62.0	62	39.6	91	58.2
8	Fall River	152	55.4	140	49.5	146	51.6
9	Lowell	233	64.4	204	51.4	202	50.9
10	Pittsfield	56	39.0	67	52.7	63	49.6
11	Lynn	155	64.2	146	47.3	147	47.7
12	Brockton	208	76.2	148	40.7	156	42.9
13	Haverhill	69	43.6	59	30.9	73	38.3
14	Revere	38	35.2	48	45.6	39	37.0
15	Everett	30	32.3	35	33.0	37	34.9
16	Worcester	304	47.7	262	37.2	242	34.4
17	Chicopee	64	35.7	72	41.4	58	33.4
18	Framingham	45	23.2	45	23.0	65	33.3
19	Taunton	98	63.1	53	32.5	53	32.5
20	Leominster	72	64.7	22	17.5	38	30.3
21	Boston	793	42.9	566	28.6	568	28.7
22	Barnstable	27	22.2	29	21.3	29	21.3
23	Plymouth	39	22.5	26	15.6	30	17.9
24	Somerville	71	43.5	37	17.1	34	15.7
25	Cambridge	46	15.1	20	5.1	32	8.2

1. Selected communities include the 25 Massachusetts cities and towns with the greatest number of teen births. Ranking is by 2006 teen birth rate. 2. Rates are per 1,000 females ages 15-19 per city/town. 3. Source for 1996 births and rates: Massachusetts Community Health Information Profile (MassCHIP), MDPH, v3.0 r315, October 2007; natality dataset and MISER 1996 population estimate. 4. Population estimates from the National Center for Health Statistics for 2006 were used to calculate birth rates at the state level. Birth rates for cities and towns were calculated using MDPH population estimates for 2005, which are the most up-to-date information available on the number of persons by age, race, and sex at the sub-state level. Please note: If the population in your community increased from 2005 to 2006, the rates listed may overestimate the actual rate. If the population in your community declined from 2005 to 2006, the rates given in the publication may underestimate the actual rate. As soon as new population data are available for cities and towns, revised rates will be available from MassCHIP <http://masschip.state.ma.us>.

Table B-15. Resident Teen Birth Characteristics, 30 Largest Municipalities<sup>1</sup>, Massachusetts: 2006

Municipality	Total Population Rank	Female Population, age 15-19	Number of Teen Births	Teen Birth Rate <sup>2</sup>	Mother's Race and Hispanic Ethnicity (% of teen births)			
					White non-Hispanic	Black non-Hispanic	Hispanic	Asian or other <sup>3</sup>
<b>State Total</b>		<b>208,824</b>	<b>4,722</b>	<b>21.3</b>	<b>44.6</b>	<b>12.9</b>	<b>35.6</b>	<b>7.0</b>
Attleboro	29	1,134	27	23.8	77.8	7.4	14.8	0.0
Barnstable	25	1,360	29	21.3	69.0	10.3	6.9	13.8
Boston	1	19,770	568	28.7	9.9	41.9	34.3	13.9
Brockton	6	3,638	156	42.9	32.7	32.1	18.6	16.7
Brookline	18	1,451	4	-- <sup>5</sup>	-- <sup>5</sup>	-- <sup>5</sup>	-- <sup>5</sup>	-- <sup>5</sup>
Cambridge	5	3,923	32	8.2	21.9	43.8	31.3	3.1
Chicopee	21	1,738	58	33.4	62.1	1.7	34.5	1.7
Fall River	9	2,829	146	51.6	71.9	5.5	13.0	9.6
Framingham	14	1,955	65	33.3	41.5	10.8	44.6	3.1
Haverhill	15	1,908	73	38.3	61.6	2.7	35.6	0.0
Lawrence	12	3,027	244	80.6	9.8	0.4	86.9	2.9
Leominster	30	1,254	38	30.3	52.6	10.5	34.2	2.6
Lowell	4	3,966	202	50.9	27.2	3.0	34.7	35.2
Lynn	8	3,084	147	47.7	20.4	10.2	60.5	8.2
Malden	17	1,430	28	19.6	35.7	32.1	21.4	10.7
Medford	22	1,776	15	8.4	33.3	20.0	33.3	13.3
Methuen	27	1,327	29	21.9	55.2	0.0	41.4	3.4
New Bedford	7	2,955	207	70.1	41.6	7.2	44.4	6.8
Newton	11	3,500	8	2.3	62.5	12.5	25.0	0.0
Peabody	24	1,432	15	10.5	86.7	0.0	13.3	0.0
Pittsfield	28	1,270	63	49.6	69.8	12.7	15.9	1.6
Plymouth	20	1,672	30	17.9	96.7	0.0	3.3	0.0
Quincy	10	2,078	22	10.6	54.6	18.2	9.1	18.2
Revere	26	1,053	39	37.0	38.5	0.0	41.0	20.5
Somerville	13	2,170	34	15.7	55.9	8.8	35.3	0.0
Springfield	3	6,074	490	80.7	10.0	23.9	64.9	1.0
Taunton	19	1,631	53	32.5	66.0	7.5	20.8	5.7
Waltham	16	2,340	24	10.3	20.8	20.8	50.0	8.3
Weymouth	23	1,452	27	18.6	85.2	3.7	0.0	11.1
Worcester	2	7,036	242	34.4	57.0	6.6	33.5	2.9

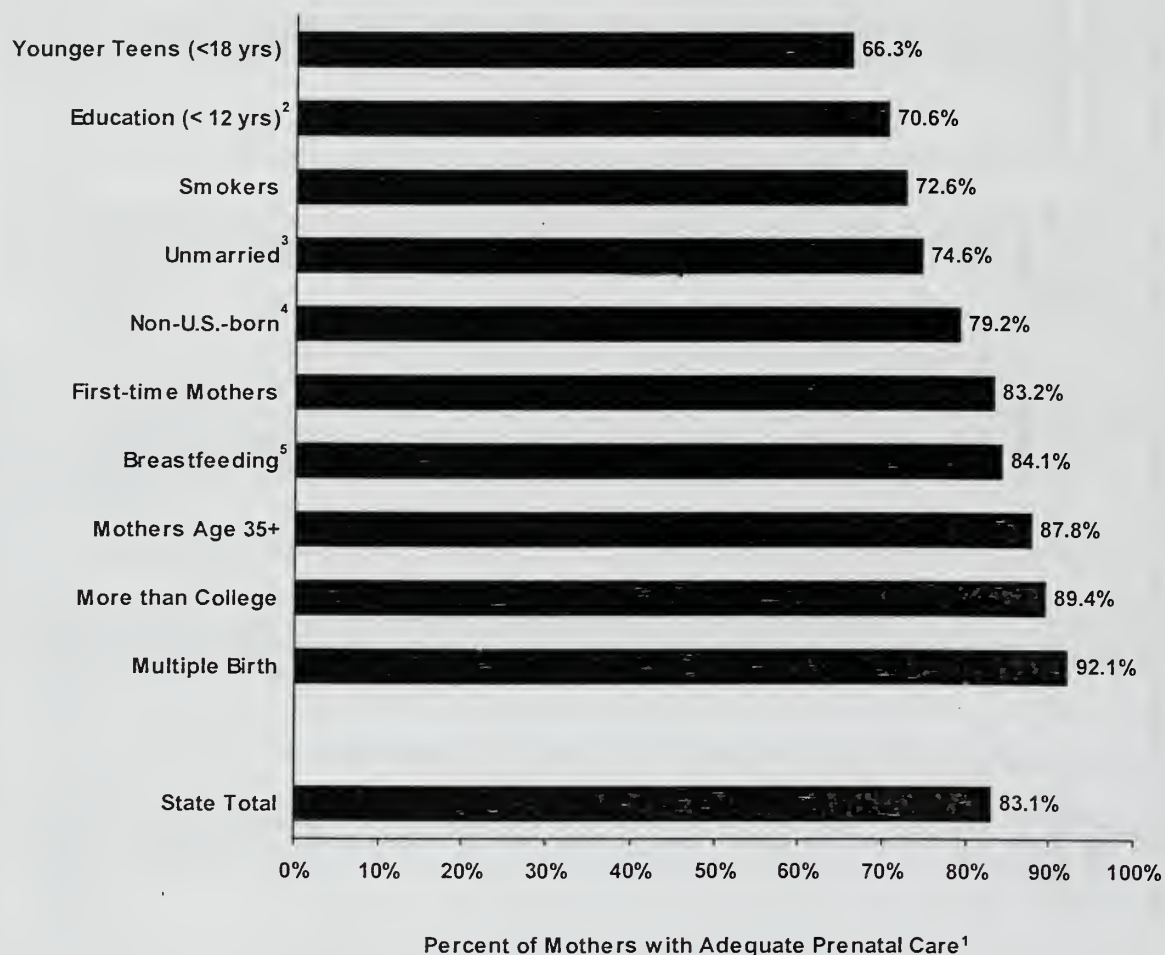
Table B-15 (continued). Resident Teen Birth Characteristics, 30 Largest Municipalities, Massachusetts: 2006

Municipality	Public Payment for Prenatal Care <sup>4</sup> (%)	Unmarried (%)	Low Birthweight <sup>6</sup> (%)	Preterm <sup>7</sup> (%)	Adequacy of Prenatal Care <sup>8</sup>		
					Adequate Intensive	Adequate Basic	Inadequate Intermediate Inadequate
State Total	78.1	93.4	9.5	8.8	32.1	37.8	9.5 20.5
Attleboro	59.1	96.3	3.7	3.7	42.3	26.9	0.0 30.8
Barnstable	72.4	82.8	3.5	6.9	31.0	48.3	10.3 10.3
Boston	78.8	96.7	10.2	8.6	25.5	46.2	12.5 15.8
Brockton	87.7	94.9	12.8	14.1	35.9	32.7	7.1 24.4
Brookline	25.0	100.0	25.0	0.0	0.0	75.0	0.0 25.0
Cambridge	65.6	90.6	6.3	6.3	37.5	28.1	9.4 25.0
Chicopee	78.6	89.7	8.6	12.3	28.6	50.0	7.1 14.3
Fall River	90.1	94.5	8.2	4.1	62.1	17.9	1.4 18.6
Framingham	76.9	81.5	10.8	7.7	45.3	35.9	7.8 10.9
Haverhill	68.5	91.8	21.9	16.4	47.2	27.8	8.3 16.7
Lawrence	84.6	92.6	10.7	11.1	26.2	43.4	12.7 17.6
Leominster	73.0	89.5	2.6	7.9	26.3	47.4	2.6 23.7
Lowell	80.9	97.0	8.9	9.9	25.2	34.2	12.4 28.2
Lynn	88.9	89.0	5.5	3.4	24.7	33.6	13.7 28.1
Malden	70.4	92.9	7.1	10.7	32.1	35.7	3.6 28.6
Medford	50.0	80.0	0.0	0.0	33.3	40.0	6.7 20.0
Methuen	65.5	89.7	10.3	10.3	44.8	31.0	3.5 20.7
New Bedford	71.1	93.2	10.6	7.7	26.3	45.9	9.8 18.0
Newton	50.0	100.0	12.5	12.5	37.5	25.0	25.0 12.5
Peabody	86.7	86.7	6.7	6.7	42.9	35.7	14.3 7.1
Pittsfield	83.9	92.1	12.7	9.5	11.1	39.7	31.7 17.5
Plymouth	60.0	96.7	10.0	10.0	33.3	40.0	6.7 20.0
Quincy	63.6	90.9	13.6	9.1	31.8	50.0	0.0 18.2
Revere	78.9	87.2	5.1	7.7	38.5	20.5	5.1 35.9
Somerville	81.8	91.2	21.2	5.9	26.5	35.3	2.9 35.3
Springfield	93.6	96.1	9.4	9.8	27.3	37.4	8.3 27.1
Taunton	80.4	100.0	7.6	7.6	20.8	45.3	13.2 20.8
Waltham	70.8	83.3	16.7	20.8	54.2	20.8	0.0 25.0
Weymouth	70.4	96.3	11.1	7.4	18.5	48.1	7.4 25.9
Worcester	75.9	93.8	9.5	7.4	28.5	40.1	15.3 16.1

NOTE: All percentages are calculated based on only those births with known values for the characteristic(s) of interest, unless otherwise stated.

1. The 30 largest municipalities are the cities and towns in Massachusetts with the largest populations according to the Massachusetts Department of Public Health (Modified Age, Race/Ethnicity, & Sex Estimates 2005 (MMARS05), released October 2006. 2. Birth rates represent the number of births per 1,000 females ages 15-19. Birth rates for cities and towns were calculated using MDPH population estimates for 2005, which are the most up-to-date information available on the number of persons by age, race, and sex at the sub-state level. 3. Mothers who designated themselves as Asian, American Indian, or Other. 4. See Section Definitions under "Prenatal Care Payment Source." 5. Calculations based on values of 1-4 are excluded. 6. Less than 2,500 grams or 5.5 pounds. 7. Less than 37 weeks gestational age. 8. Based on Adequacy of Prenatal Care Utilization (APNCU) Index. Please see Section Definitions for an explanation of index and adequacy categories.

**Figure B-9. Adequacy of Prenatal Care<sup>1</sup> by Selected Maternal Characteristics, Massachusetts: 2006**

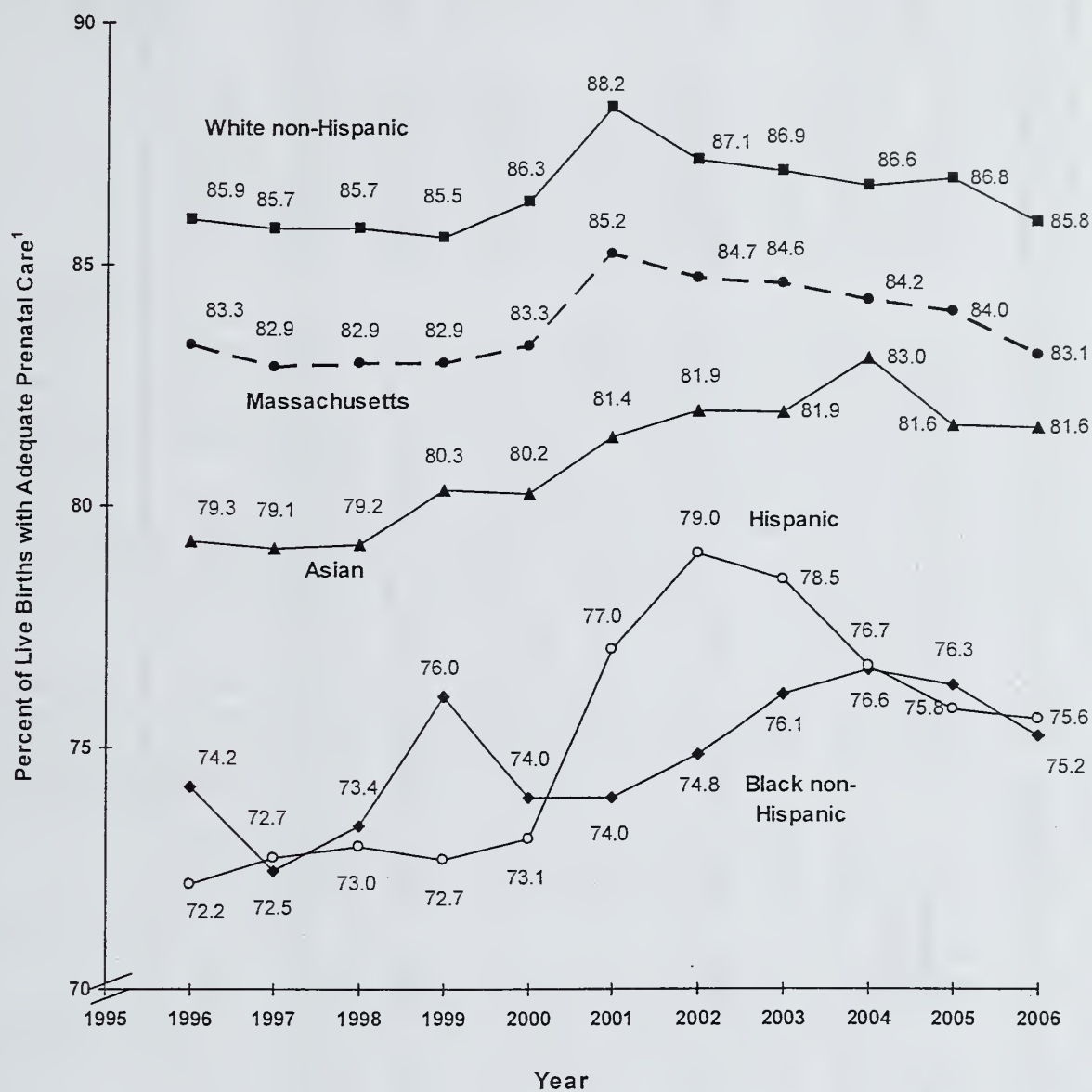


NOTE: All percentages are calculated based on only those births with known values for the characteristic(s) of interest, unless otherwise stated. Characteristics of interest are not mutually exclusive, except as noted.

1. Based on the Adequacy of Prenatal Care Utilization (APNCU) Index. 2. Women 20 years of age and older. 3. Marital status at time of birth. 4. Non-U.S.-born includes women born outside of the 50 U.S. states, District of Columbia, and U.S. territories (Puerto Rico, U.S. Virgin Islands, Guam). 5. Mother was breastfeeding or was intending to breastfeed at the time the birth certificate was completed.



**Figure B-10. Trends in Adequacy of Prenatal Care<sup>1</sup> by Race and Hispanic Ethnicity, Massachusetts: 1996-2006**



PLEASE NOTE THAT THE VERTICAL SCALE OF GRAPH REPRESENTS A SMALL INTERVAL (from 70% to 90%) FOR PURPOSES OF VISUAL REPRESENTATION.

NOTE: All percentages are calculated based on only those births with known values for the characteristic(s) of interest, unless otherwise stated.

1. Based on the Adequacy of Prenatal Care Utilization (APNCU) Index. Please note: The APNCU is an assessment of the timing and number of prenatal care visits and not an evaluation of the quality of care delivered.

Table B-16. Adequacy of Prenatal Care Utilization<sup>1</sup>: Summary and Component Indices, Massachusetts: 2006

	Adequate Total <sup>2</sup>		Adequate Intensive <sup>3</sup>		Adequate Basic <sup>3</sup>		Intermediate <sup>3</sup>		Inadequate <sup>3</sup>		Unknown <sup>3</sup>	
	n	%	n	%	n	%	n	%	n	%	n	%
<b>Summary Index<sup>4</sup></b>												
Adequacy of Prenatal Care Utilization	63,781	83.1	30,190	39.3	33,591	43.8	6,075	7.9	6,908	9.0		906
<b>Component Indices<sup>4</sup></b>												
Adequacy of Initiation	70,408	91.7	30,259	39.4	40,149	52.3	4,018	5.2	2,338	3.0		906
Adequacy of Received Services (Visits)	69,184	90.1	34,384	44.8	34,800	45.3	6,657	8.7	923	1.2		906

NOTE: All percentages are calculated based on only those births with known values for the characteristic(s) of interest, unless otherwise stated.

1. Based on the Adequacy of Prenatal Care Utilization (APNCU) Index. 2. Adequate Total is the sum of Adequate Intensive and Adequate Basic categories. 3. For definitions of these categories, please see Section Definitions. 4. For an explanation of the APNCU Index (summary index) and its component indices, please see Section Definitions.

**TableB-17. Adequacy of Prenatal Care<sup>1</sup> by Selected Characteristics, Massachusetts: 2006**

	<u>Adequate Total<sup>2</sup></u>		<u>Adequate Intensive</u>		<u>Adequate Basic</u>		<u>Intermediate</u>		<u>Inadequate</u>		<u>Unknown</u>
	n	%	n	%	n	%	n	%	n	%	n
<b>State Total</b>	<b>63,781</b>	<b>83.1%</b>	<b>30,190</b>	<b>39.3%</b>	<b>33,591</b>	<b>43.8%</b>	<b>6,075</b>	<b>7.9%</b>	<b>6,908</b>	<b>9.0%</b>	<b>906</b>
<b>Maternal Demographics</b>											
<u>Age</u>											
<18	937	66.3%	431	30.5%	506	35.8%	128	9.1%	349	24.7%	21
18-19	2,356	71.1%	1,081	32.6%	1,275	38.5%	320	9.7%	639	19.3%	28
20-24	9,214	75.3%	4,289	35.1%	4,925	40.3%	1,151	9.4%	1,868	15.3%	187
25-29	15,212	82.6%	7,111	38.6%	8,101	44.0%	1,558	8.5%	1,645	8.9%	218
30-34	20,244	86.6%	9,364	40.1%	10,880	46.6%	1,772	7.6%	1,356	5.8%	239
35-39	12,822	87.9%	6,254	42.9%	6,568	45.0%	942	6.5%	819	5.6%	166
40+	2,989	87.3%	1,653	48.3%	1,336	39.0%	204	6.0%	231	6.7%	45
<u>Educational Attainment</u>											
< high school	5,591	69.3%	2,772	34.4%	2,819	35.0%	859	10.7%	1,615	20.0%	169
high school	15,751	78.2%	7,457	37.0%	8,294	41.2%	1,924	9.5%	2,474	12.3%	213
some college	13,911	84.6%	6,925	42.1%	6,986	42.5%	1,140	6.9%	1,383	8.4%	266
college	17,775	88.5%	8,024	40.0%	9,751	48.6%	1,377	6.9%	923	4.6%	129
more than college	10,656	89.4%	4,951	41.6%	5,705	47.9%	768	6.4%	491	4.1%	62
<u>Race/Ethnicity</u>											
Hispanic	7,980	75.6%	3,752	35.5%	4,228	40.0%	1,091	10.3%	1,489	14.1%	136
White non-Hispanic	45,062	85.8%	21,491	40.9%	23,571	44.9%	3,880	7.4%	3,551	6.8%	482
Black non-Hispanic	4,728	75.2%	2,215	35.2%	2,513	40.0%	526	8.4%	1,032	16.4%	166
Asian	4,435	81.6%	2,017	37.1%	2,418	44.5%	408	7.5%	593	10.9%	33
Other	1,542	79.1%	695	35.7%	847	43.5%	168	8.6%	239	12.3%	46
<u>Birthplace</u>											
U.S. States/D.C.	45,889	84.9%	21,901	40.5%	23,988	44.4%	4,032	7.5%	4,134	7.6%	600
Puerto Rico/U.S. Terr.	1,549	75.1%	713	34.6%	836	40.5%	216	10.5%	297	14.4%	17
Non-U.S.-Born	16,339	79.2%	7,572	36.7%	8,767	42.5%	1,827	8.9%	2,475	12.0%	288
<b>Pregnancy-Related Factors</b>											
<u>Parity<sup>3</sup></u>											
1	28,393	83.2%	13,146	38.5%	15,247	44.7%	2,655	7.8%	3,098	9.1%	320
2-3	31,272	83.9%	14,925	40.1%	16,347	43.9%	2,990	8.0%	2,990	8.0%	417
4+	4,068	76.7%	2,099	39.6%	1,969	37.1%	427	8.0%	812	15.3%	90
<u>Smoking<sup>4</sup></u>											
Yes	4,113	72.6%	2,139	37.7%	1,974	34.8%	497	8.8%	1,058	18.7%	74
No	59,617	83.9%	28,021	39.4%	31,596	44.5%	5,574	7.8%	5,840	8.2%	782
<b>Birth Outcomes</b>											
<u>Plurality</u>											
Singleton	60,596	82.7%	27,418	37.4%	33,178	45.3%	5,987	8.2%	6,722	9.2%	841
Multiple birth	3,185	92.1%	2,772	80.1%	413	11.9%	88	2.5%	186	5.4%	65
<u>Birthweight</u>											
<500 g	90	84.9%	82	77.4%	8	7.5%	4	— <sup>5</sup>	12	11.3%	14
500-1,499 g	750	86.9%	664	76.9%	86	10.0%	24	2.8%	89	10.3%	58
1,499-2,499 g	4,283	85.8%	3,418	68.5%	865	17.3%	182	3.6%	527	10.6%	117
2,500-3,999 g	52,586	82.7%	23,656	37.2%	28,930	45.5%	5,220	8.2%	5,743	9.0%	586
4,000+ g	6,027	83.8%	2,340	32.5%	3,687	51.3%	641	8.9%	526	7.3%	66
<u>Gestational Age</u>											
<28 weeks	387	84.3%	356	77.6%	31	6.8%	18	3.9%	54	11.8%	40
<37 weeks	5,858	86.9%	5,041	74.7%	817	12.1%	228	3.4%	658	9.8%	210
37-42 weeks	57,891	82.8%	25,134	35.9%	32,757	46.8%	5,836	8.3%	6,227	8.9%	622

NOTE: All percentages are calculated based on only those births with known values for the characteristic(s) of interest, unless otherwise stated.

1. Based on the Adequacy of Prenatal Care Utilization (APNCU) Index. See Section Definitions for definitions of Index and its categories. 2. Adequate Total is the sum of Adequate Intensive and Adequate Basic. 3. Parity is the number of live births including this birth. 4. Smoking during pregnancy is self-reported by the mother and should be interpreted with caution. 5. Calculations based on values of 1-4 are excluded.



**Table B-18. Adequacy of Prenatal Care<sup>1</sup> Initiation by Selected Characteristics,  
Massachusetts: 2006**

	<u>Adequate Total<sup>2</sup></u>		<u>Adequate Intensive</u>		<u>Adequate Basic</u>		<u>Intermediate</u>		<u>Inadequate</u>		<u>Unknown</u>
	n	%	n	%	n	%	n	%	n	%	n
<b>State Total</b>	<b>70,408</b>	<b>91.7%</b>	<b>30,259</b>	<b>39.4%</b>	<b>40,149</b>	<b>52.3%</b>	<b>4,018</b>	<b>5.2%</b>	<b>2,338</b>	<b>3.0%</b>	<b>906</b>
<b>Maternal Demographics</b>											
<u>Age</u>											
<18	1,082	76.5%	366	25.9%	716	50.6%	213	15.1%	119	8.4%	21
18-19	2,717	82.0%	973	29.4%	1,744	52.6%	393	11.9%	205	6.2%	28
20-24	10,490	85.8%	4,036	33.0%	6,454	52.8%	1,120	9.2%	623	5.1%	187
25-29	16,912	91.8%	7,272	39.5%	9,640	52.3%	928	5.0%	575	3.1%	218
30-34	22,154	94.8%	10,040	43.0%	12,114	51.8%	754	3.2%	464	2.0%	239
35-39	13,839	94.9%	6,168	42.3%	7,671	52.6%	472	3.2%	272	1.9%	166
40+	3,206	93.6%	1,400	40.9%	1,806	52.7%	138	4.0%	80	2.3%	45
<u>Educational Attainment</u>											
< high school	6,542	81.1%	2,023	25.1%	4,519	56.0%	986	12.2%	537	6.7%	169
high school	17,886	88.8%	7,321	36.3%	10,565	52.4%	1,459	7.2%	804	4.0%	213
some college	15,148	92.2%	6,414	39.0%	8,734	53.1%	817	5.0%	469	2.9%	266
college	19,241	95.8%	9,235	46.0%	10,006	49.8%	485	2.4%	349	1.7%	129
more than college	11,486	96.4%	5,222	43.8%	6,264	52.6%	261	2.2%	168	1.4%	62
<u>Race/Ethnicity</u>											
Hispanic	9,152	86.7%	3,541	33.5%	5,611	53.1%	936	8.9%	472	4.5%	136
White non-Hispanic	49,295	93.9%	21,872	41.7%	27,423	52.2%	2,033	3.9%	1,165	2.2%	482
Black non-Hispanic	5,306	84.4%	2,224	35.4%	3,082	49.0%	575	9.1%	405	6.4%	166
Asian	4,887	89.9%	1,864	34.3%	3,023	55.6%	348	6.4%	201	3.7%	33
Other	1,732	88.9%	739	37.9%	993	50.9%	125	6.4%	92	4.7%	46
<u>Birthplace</u>											
U.S. States/D.C.	50,304	93.1%	22,249	41.2%	28,055	51.9%	2,426	4.5%	1,325	2.5%	600
Puerto Rico/U.S. Terr.	1,786	86.6%	699	33.9%	1,087	52.7%	194	9.4%	82	4.0%	17
Non-U.S.-Born	18,314	88.7%	7,310	35.4%	11,004	53.3%	1,398	6.8%	929	4.5%	288
<b>Pregnancy-Related Factors</b>											
<u>Parity<sup>3</sup></u>											
1	31,259	91.5%	13,458	39.4%	17,801	52.1%	1,785	5.2%	1,102	3.2%	320
2-3	34,559	92.8%	14,974	40.2%	19,585	52.6%	1,751	4.7%	942	2.5%	417
4+	4,539	85.5%	1,794	33.8%	2,745	51.7%	478	9.0%	290	5.5%	90
<u>Smoking<sup>4</sup></u>											
Yes	4,695	82.8%	1,700	30.0%	2,995	52.8%	575	10.1%	398	7.0%	74
No	65,657	92.4%	28,532	40.2%	37,125	52.3%	3,441	4.8%	1,933	2.7%	782
<b>Birth Outcomes</b>											
<u>Plurality</u>											
Singleton	67,131	91.6%	28,778	39.3%	38,353	52.3%	3,903	5.3%	2,271	3.1%	841
Multiple birth	3,277	94.7%	1,481	42.8%	1,796	51.9%	115	3.3%	67	1.9%	65
<u>Birthweight</u>											
<500 g	95	89.6%	36	34.0%	59	55.7%	3	-- <sup>5</sup>	8	7.5%	14
500-1,499 g	776	89.9%	358	41.5%	418	48.4%	58	6.7%	29	3.4%	58
1,499-2,499 g	4,495	90.0%	2,037	40.8%	2,458	49.2%	301	6.0%	196	3.9%	117
2,500-3,999 g	58,269	91.7%	24,866	39.1%	33,403	52.6%	3,359	5.3%	1,921	3.0%	586
4,000+ g	6,724	93.5%	2,944	40.9%	3,780	52.5%	294	4.1%	176	2.4%	66
<u>Gestational Age</u>											
<28 weeks	407	88.7%	181	39.4%	226	49.2%	28	6.1%	24	5.2%	40
<37 weeks	6,118	90.7%	2,806	41.6%	3,312	49.1%	380	5.6%	246	3.6%	210
37-42 weeks	64,246	91.8%	27,436	39.2%	36,810	52.6%	3,630	5.2%	2,078	3.0%	622

NOTE: All percentages are calculated based on only those births with known values for the characteristic(s) of interest, unless otherwise stated.

1. Based on the Adequacy of Prenatal Care Utilization (APNCU) Index. See Section Definitions for an explanation of Index and its categories. 2. Adequate Total is the sum of Adequate Intensive and Adequate Basic. 3. Parity is the number of live births including this birth. 4. Smoking during pregnancy is self-reported by the mother and should be interpreted with caution. 5. Calculations based on values of 1-4 are excluded.



**Table B-19. Adequacy of Prenatal Care<sup>1</sup> Visits by Selected Characteristics,  
Massachusetts: 2006**

	<u>Adequate Total<sup>2</sup></u>		<u>Adequate Intensive</u>		<u>Adequate Basic</u>		<u>Intermediate</u>		<u>Inadequate</u>		<u>Unknown</u>
	n	%	n	%	n	%	n	%	n	%	n
<b>State Total</b>	<b>69,184</b>	<b>90.1%</b>	<b>34,384</b>	<b>44.8%</b>	<b>34,800</b>	<b>45.3%</b>	<b>6,657</b>	<b>8.7%</b>	<b>923</b>	<b>1.2%</b>	<b>906</b>
<b>Maternal Demographics</b>											
<u>Age</u>											
<18	1,216	86.0%	647	45.8%	569	40.2%	166	11.7%	32	2.3%	21
18-19	2,856	86.2%	1,466	44.2%	1,390	41.9%	383	11.6%	76	2.3%	28
20-24	10,636	86.9%	5,334	43.6%	5,302	43.3%	1,360	11.1%	237	1.9%	187
25-29	16,489	89.5%	8,121	44.1%	8,368	45.4%	1,698	9.2%	228	1.2%	218
30-34	21,332	91.3%	10,237	43.8%	11,095	47.5%	1,843	7.9%	197	0.8%	239
35-39	13,466	92.3%	6,765	46.4%	6,701	46.0%	988	6.8%	129	0.9%	166
40+	3,182	92.9%	1,807	52.8%	1,375	40.2%	219	6.4%	23	0.7%	45
<u>Educational Attainment</u>											
< high school	6,816	84.5%	3,684	45.7%	3,132	38.8%	1,050	13.0%	199	2.5%	169
high school	17,645	87.6%	8,896	44.2%	8,749	43.4%	2,145	10.6%	359	1.8%	213
some college	15,016	91.4%	7,800	47.5%	7,216	43.9%	1,239	7.5%	179	1.1%	266
college	18,538	92.3%	8,657	43.1%	9,881	49.2%	1,429	7.1%	108	0.5%	129
more than college	11,057	92.8%	5,278	44.3%	5,779	48.5%	787	6.6%	71	0.6%	62
<u>Race/Ethnicity</u>											
Hispanic	9,166	86.8%	4,657	44.1%	4,509	42.7%	1,247	11.8%	147	1.4%	136
White non-Hispanic	47,828	91.1%	23,671	45.1%	24,157	46.0%	4,128	7.9%	537	1.0%	482
Black non-Hispanic	5,526	87.9%	2,815	44.8%	2,711	43.1%	624	9.9%	136	2.2%	166
Asian	4,905	90.2%	2,396	44.1%	2,509	46.2%	461	8.5%	70	1.3%	33
Other	1,722	88.4%	824	42.3%	898	46.1%	195	10.0%	32	1.6%	46
<u>Birthplace</u>											
U.S. States/D.C.	49,039	90.7%	24,345	45.0%	24,694	45.7%	4,372	8.1%	644	1.2%	600
Puerto Rico/U.S. Terr.	1,769	85.8%	881	42.7%	888	43.1%	254	12.3%	39	1.9%	17
Non-U.S.-Born	18,370	89.0%	9,152	44.3%	9,218	44.7%	2,031	9.8%	240	1.2%	288
<b>Pregnancy-Related Factors</b>											
<u>Parity<sup>3</sup></u>											
1	30,903	90.5%	15,114	44.3%	15,789	46.2%	2,905	8.5%	338	1.0%	320
2-3	33,557	90.1%	16,704	44.8%	16,853	45.2%	3,243	8.7%	452	1.2%	417
4+	4,672	88.0%	2,544	47.9%	2,128	40.1%	505	9.5%	130	2.4%	90
<u>Smoking<sup>4</sup></u>											
Yes	4,876	86.0%	2,719	48.0%	2,157	38.1%	588	10.4%	204	3.6%	74
No	64,253	90.5%	31,631	44.5%	32,622	45.9%	6,065	8.5%	713	1.0%	782
<b>Birth Outcomes</b>											
<u>Plurality</u>											
Singleton	65,836	89.8%	31,461	42.9%	34,375	46.9%	6,567	9.0%	902	1.2%	841
Multiple birth	3,348	96.8%	2,923	84.5%	425	12.3%	90	2.6%	21	0.6%	65
<u>Birthweight</u>											
<500 g	95	89.6%	86	81.1%	9	8.5%	4	-- <sup>5</sup>	7	6.6%	14
500-1,499 g	813	94.2%	721	83.5%	92	10.7%	25	2.9%	25	2.9%	58
1,499-2,499 g	4,687	93.9%	3,771	75.5%	916	18.3%	210	4.2%	95	1.9%	117
2,500-3,999 g	57,092	89.8%	27,116	42.7%	29,976	47.2%	5,733	9.0%	724	1.1%	586
4,000+ g	6,448	89.6%	2,657	36.9%	3,791	52.7%	679	9.4%	67	0.9%	66
<u>Gestational Age</u>											
<28 weeks	416	90.6%	383	83.4%	33	7.2%	18	3.9%	25	5.4%	40
<37 weeks	6,356	94.2%	5,492	81.4%	864	12.8%	257	3.8%	131	1.9%	210
37-42 weeks	62,787	89.8%	28,872	41.3%	33,915	48.5%	6,388	9.1%	779	1.1%	622

NOTE: All percentages are calculated based on only those births with known values for the characteristic(s) of interest, unless otherwise stated.

1. Based on the Adequacy of Prenatal Care Utilization (APNCU) Index. See Glossary and Technical Notes in the Appendix for definitions of Index and its categories.

2. Adequate Total is the sum of Adequate Intensive and Adequate Basic. 3. Parity is the number of live births including this birth. 4. Smoking during pregnancy is self-reported by the mother and should be interpreted with caution. 5. Calculations based on values of 1-4 are excluded.

**Table B-20. Birth Characteristics by Race and Hispanic Ethnicity and Source of Prenatal Care Payment, Massachusetts: 2006**

Race/Ethnicity and Payment Source	Births <sup>1</sup>		Teen Births				Birthweight			
	n	%	<18 Years		<20 Years		Very Low <sup>2</sup>		Low <sup>3</sup>	
	n	%	n	%	n	%	n	%	n	%
<b>STATE TOTAL<sup>4</sup></b>	<b>77,670</b>	<b>100.0</b>	<b>1,435</b>	<b>1.8</b>	<b>4,778</b>	<b>6.2</b>	<b>1,041</b>	<b>1.3</b>	<b>6,150</b>	<b>7.9</b>
Public	26,009	34.2	1,073	4.1	3,672	14.1	403	1.5	2,296	8.8
Medicaid <sup>5</sup>	18,973	25.0	818	4.3	2,782	14.7	318	1.7	1,759	9.3
Other Public <sup>6</sup>	7,036	9.3	255	3.6	890	12.6	85	1.2	537	7.6
Private <sup>7</sup>	49,280	64.8	325	0.7	984	2.0	526	1.1	3,499	7.1
<b>White non-Hispanic</b>	<b>52,975</b>	<b>100.0</b>	<b>519</b>	<b>1.0</b>	<b>2,115</b>	<b>4.0</b>	<b>590</b>	<b>1.1</b>	<b>3,799</b>	<b>7.2</b>
Public	11,827	22.9	335	2.8	1,464	12.4	164	1.4	984	8.3
Medicaid <sup>5</sup>	8,992	17.4	275	3.1	1,170	13.0	133	1.5	781	8.7
Other Public <sup>6</sup>	2,835	5.5	60	2.1	294	10.4	31	1.1	203	7.2
Private <sup>7</sup>	39,293	76.1	172	0.4	591	1.5	362	0.9	2,577	6.6
<b>Black non-Hispanic</b>	<b>6,452</b>	<b>100.0</b>	<b>215</b>	<b>3.3</b>	<b>620</b>	<b>9.6</b>	<b>220</b>	<b>3.4</b>	<b>806</b>	<b>12.5</b>
Public	3,847	60.6	164	4.3	485	12.6	110	2.9	461	12.0
Medicaid <sup>5</sup>	2,995	47.2	143	4.8	399	13.3	89	3.0	380	12.7
Other Public <sup>6</sup>	852	13.4	21	2.5	86	10.1	21	2.5	81	9.5
Private <sup>7</sup>	2,435	38.4	43	1.8	117	4.8	83	3.4	294	12.1
<b>Hispanic</b>	<b>10,696</b>	<b>100.0</b>	<b>588</b>	<b>5.5</b>	<b>1,709</b>	<b>16.0</b>	<b>131</b>	<b>1.2</b>	<b>895</b>	<b>8.4</b>
Public	7,809	73.3	491	6.3	1,470	18.8	96	1.2	644	8.2
Medicaid <sup>5</sup>	5,011	47.0	325	6.5	990	19.8	66	1.3	432	8.6
Other Public <sup>6</sup>	2,798	26.3	166	5.9	480	17.2	30	1.1	212	7.6
Private <sup>7</sup>	2,749	25.8	85	3.1	213	7.7	30	1.1	225	8.2
<b>Asian</b>	<b>5,469</b>	<b>100.0</b>	<b>63</b>	<b>1.2</b>	<b>147</b>	<b>2.7</b>	<b>52</b>	<b>1.0</b>	<b>436</b>	<b>8.0</b>
Public	1,383	25.4	44	3.2	112	8.1	15	1.1	108	7.8
Medicaid <sup>5</sup>	1,087	19.9	41	3.8	101	9.3	15	1.4	88	8.1
Other Public <sup>6</sup>	296	5.4	3	— <sup>8</sup>	11	3.7	0	0.0	20	6.8
Private <sup>7</sup>	4,035	74.0	17	0.4	30	0.7	35	0.9	320	7.9
<b>Other<sup>9</sup></b>	<b>1,995</b>	<b>100.0</b>	<b>50</b>	<b>2.5</b>	<b>185</b>	<b>9.3</b>	<b>47</b>	<b>2.4</b>	<b>204</b>	<b>10.2</b>
Public	1,137	59.9	39	3.4	141	12.4	18	1.6	99	8.7
Medicaid <sup>5</sup>	883	46.5	34	3.9	122	13.8	15	1.7	78	8.8
Other Public <sup>6</sup>	254	13.4	5	2.0	19	7.5	3	— <sup>8</sup>	21	8.3
Private <sup>7</sup>	746	39.3	8	1.1	33	4.4	16	2.1	80	10.7

**Table B-20 (continued). Birth Characteristics by Race/Hispanic Ethnicity and Source of Prenatal Care Payment, Massachusetts: 2006**

Race/Ethnicity and Payment Source	Prenatal Care				Cesarean Section		Breastfeeding <sup>11</sup>	
	Adequate <sup>10</sup>		Began 1st Trimester					
	n	%	n	%	n	%	n	%
<b>STATE TOTAL<sup>4</sup></b>	<b>63,781</b>	<b>83.1</b>	<b>63,326</b>	<b>82.1</b>	<b>25,901</b>	<b>33.4</b>	<b>61,076</b>	<b>79.9</b>
Public	18,949	73.9	18,124	70.4	7,481	28.8	18,899	72.7
Medicaid <sup>5</sup>	14,001	74.7	13,457	71.7	5,497	29.0	13,440	70.9
Other Public <sup>6</sup>	4,948	71.7	4,667	67.1	1,984	28.2	5,459	77.6
Private <sup>7</sup>	43,401	88.4	43,649	88.7	17,606	35.8	41,334	83.9
<b>White non-Hispanic</b>	<b>45,062</b>	<b>85.8</b>	<b>45,310</b>	<b>85.8</b>	<b>18,443</b>	<b>34.9</b>	<b>40,639</b>	<b>78.2</b>
Public	8,947	76.3	8,582	73.0	3,637	30.8	7,688	65.0
Medicaid <sup>5</sup>	6,839	76.6	6,533	73.1	2,739	30.5	5,559	61.9
Other Public <sup>6</sup>	2,108	75.2	2,049	72.6	898	31.7	2,129	75.1
Private <sup>7</sup>	34,900	89.2	35,399	90.2	14,127	36.0	32,347	82.3
<b>Black non-Hispanic</b>	<b>4,728</b>	<b>75.2</b>	<b>4,539</b>	<b>71.9</b>	<b>2,143</b>	<b>33.3</b>	<b>5,172</b>	<b>80.7</b>
Public	2,592	69.5	2,483	66.4	1,171	30.5	2,963	77.1
Medicaid <sup>5</sup>	2,070	71.3	2,005	68.9	896	30.0	2,300	76.8
Other Public <sup>6</sup>	522	63.3	478	57.5	275	32.4	663	77.9
Private <sup>7</sup>	2,080	86.4	1,998	82.7	929	38.2	2,138	87.9
<b>Hispanic</b>	<b>7,980</b>	<b>75.6</b>	<b>7,675</b>	<b>72.4</b>	<b>2,998</b>	<b>28.1</b>	<b>8,821</b>	<b>82.6</b>
Public	5,582	72.6	5,364	69.4	1,991	25.5	6,292	80.6
Medicaid <sup>5</sup>	3,633	73.3	3,555	71.5	1,338	26.7	4,087	81.6
Other Public <sup>6</sup>	1,949	71.3	1,809	65.5	653	23.4	2,205	78.9
Private <sup>7</sup>	2,332	85.3	2,245	81.9	968	35.3	2,429	88.4
<b>Asian</b>	<b>4,435</b>	<b>81.6</b>	<b>4,241</b>	<b>77.9</b>	<b>1,642</b>	<b>30.0</b>	<b>4,746</b>	<b>86.8</b>
Public	991	72.6	883	64.5	330	23.9	985	71.2
Medicaid <sup>5</sup>	782	72.7	705	65.3	260	23.9	756	69.5
Other Public <sup>6</sup>	209	72.3	178	61.6	70	23.6	229	77.4
Private <sup>7</sup>	3,422	85.0	3,339	82.9	1,301	32.3	3,724	92.3
<b>Other<sup>9</sup></b>	<b>1,542</b>	<b>79.1</b>	<b>1,524</b>	<b>77.5</b>	<b>655</b>	<b>32.9</b>	<b>1,668</b>	<b>87.1</b>
Public	834	74.5	808	72.1	351	30.9	965	84.9
Medicaid <sup>5</sup>	675	77.4	656	75.2	263	29.8	733	83.1
Other Public <sup>6</sup>	159	64.1	152	61.3	88	34.6	232	91.3
Private <sup>7</sup>	647	87.2	650	87.6	271	36.3	675	90.5

NOTE: All percentages are calculated based on only those births with known values for the characteristic(s) of interest, unless otherwise stated.

1. In the "Births" column, percentages are based on race/ethnicity category totals (in column). For all other characteristics, percentages are based on the total number of births for the race/ethnicity by payment source for the row. 2. Very low birthweight: less than 1,500 grams or 3.3 pounds. 3. Low Birthweight: less than 2,500 grams or 5.5 pounds. 4. Total births do not equal Public + Private because Workers' Compensation, self-paid, and other are in the state total but not shown in the table. 5. Medicaid/MassHealth. 6. Other Public: Commonhealth, Healthy Start, Medicare, other government programs, and free care. 7. Private: commercial indemnity plans or commercial managed care organizations (HMO, PPO, IPP, or IPA). 8. Calculations based on values of 1-4 are excluded. 9. Other: Mothers who designated their race as American Indian or "Other." 10. Based on the Adequacy of Prenatal Care Utilization (APNCU) Index. 11. Mother was breastfeeding or was intending to breastfeed at the time the birth certificate was completed.



Table B-21. Births by Birthweight, Race and Hispanic Ethnicity, Massachusetts: 2006

Birthweight (in grams)	Total		White non- Hispanic		Black non- Hispanic		Hispanic		Asian		Other		Unknown race/ethnicity n
	n	% <sup>1</sup>	n	% <sup>1</sup>	n	% <sup>1</sup>	n	% <sup>1</sup>	n	% <sup>1</sup>	n	% <sup>1</sup>	
State Total	77,670	100.0	52,975	100.0	6,452	100.0	10,696	100.0	5,469	100.0	1,995	100.0	83
<500	120	0.2	62	0.1	39	0.6	15	0.1	2	-- <sup>2</sup>	1	-- <sup>2</sup>	1
500-999	389	0.5	212	0.4	93	1.4	58	0.5	13	0.2	13	0.7	0
1,000-1,499	532	0.7	316	0.6	88	1.4	58	0.5	37	0.7	33	1.7	0
1,500-1,999	1,232	1.6	788	1.5	172	2.7	163	1.5	67	1.2	40	2.0	2
2,000-2,499	3,877	5.0	2,421	4.6	414	6.4	601	5.6	317	5.8	117	5.9	7
2,500-2,999	12,829	16.5	7,791	14.7	1,346	20.9	2,069	19.3	1,264	23.1	351	17.6	8
3,000-3,499	28,862	37.2	19,102	36.1	2,440	37.8	4,226	39.5	2,289	41.9	785	39.3	20
3,500-3,999	22,444	28.9	16,539	31.2	1,450	22.5	2,733	25.6	1,194	21.8	517	25.9	11
4,000-4,499	6,198	8.0	4,820	9.1	346	5.4	675	6.3	244	4.5	112	5.6	1
4,500-4,999	959	1.2	785	1.5	47	0.7	77	0.7	32	0.6	18	0.9	0
>=5,000	103	0.1	75	0.1	12	0.2	9	0.1	4	-- <sup>2</sup>	3	-- <sup>2</sup>	0
Unknown birthweight	125	0.2	64	0.1	5	0.1	12	0.1	6	0.1	5	0.3	33
VLBW <sup>3</sup> (0-1,499 g)	1,041	1.3	590	1.1	220	3.4	131	1.2	52	1.0	47	2.4	1
LBW <sup>4</sup> (0-2,499 g)	6,150	7.9	3,799	7.2	806	12.5	895	8.4	436	8.0	204	10.3	10

NOTE: Percentages for detailed birthweight rows ("<500" through "Unknown birthweight") are calculated based on births including those with unknown birthweight. Percentages for VLBW and LBW rows are calculated based on births with known birthweight only.

1. Percentages are based on column totals. 2. Calculations based on values of 1-4 are excluded. 3. Very Low Birthweight (VLBW): less than 1,500 grams (3.3 lbs.). 4. Low Birthweight (LBW): less than 2,500 grams (5.5 lbs.).



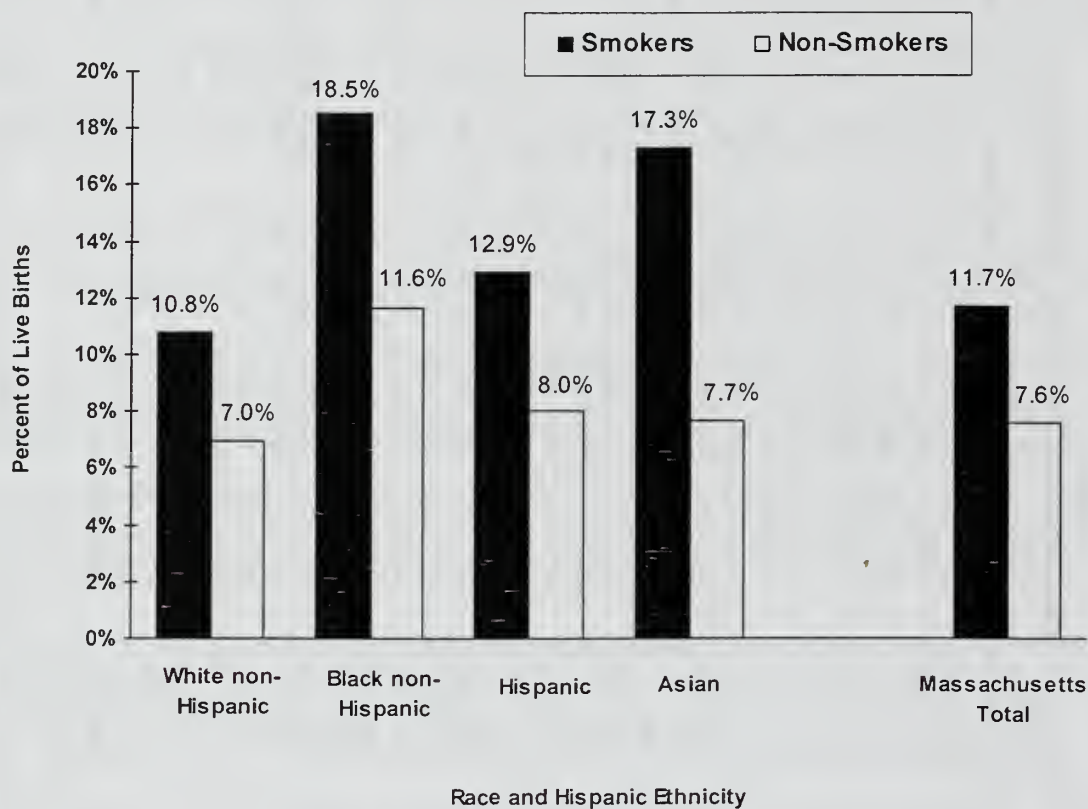
Table B-22. Low Birthweight by Plurality, Massachusetts: 1996-2006

Age Group	Year	Singleton						Twin						Triplets or more						Total Multiples						Total Births					
		VLBW <sup>1</sup>			LBW <sup>2</sup>			VLBW <sup>1</sup>			LBW <sup>2</sup>			VLBW <sup>1</sup>			LBW <sup>2</sup>			VLBW <sup>1</sup>			LBW <sup>2</sup>			VLBW <sup>1</sup>			LBW <sup>2</sup>		
		n	%		n	%		n	%		n	%		n	%		n	%		n	%		n	%		n	%		n	%	
All Ages	1996	657	0.9	3,674	4.8	227	8.8	1,264	49.1	45	24.5	167	90.8	272	9.9	1,431	51.9	929	1.2	5,105	6.4										
	1997	731	0.9	3,938	5.1	292	10.3	1,439	50.5	75	28.6	240	91.6	367	11.8	1,679	54.0	1,098	1.4	5,617	7.0										
	1998	690	0.9	3,819	4.9	298	9.6	1,570	50.7	82	28.5	266	92.4	380	11.2	1,836	54.2	1,070	1.3	5,655	7.0										
	1999	731	0.9	3,869	5.0	324	10.3	1,617	51.6	65	26.5	222	90.6	389	11.5	1,839	54.5	1,120	1.4	5,708	7.1										
	2000	722	0.9	3,886	5.1	284	8.9	1,603	50.0	84	35.0	222	92.5	368	10.7	1,825	53.0	1,090	1.4	5,711	7.1										
	2001	730	0.9	3,931	5.1	310	9.2	1,654	49.2	74	32.9	210	93.3	384	10.7	1,864	52.0	1,114	1.4	5,795	7.2										
	2002	699	0.9	3,972	5.2	342	9.2	1,855	50.2	68	28.0	233	95.9	410	10.4	2,088	53.0	1,109	1.4	6,060	7.5										
	2003	713	0.9	4,006	5.3	331	9.3	1,877	52.9	71	28.5	232	93.2	402	10.6	2,109	55.6	1,115	1.4	6,115	7.6										
	2004	740	1.0	4,015	5.4	324	9.2	1,879	53.2	84	34.4	231	94.7	408	10.8	2,110	55.9	1,148	1.5	6,125	7.8										
	2005	701	1.0	4,126	5.6	322	9.5	1,765	52.3	75	39.5	181	95.3	397	11.1	1,946	54.6	1,098	1.4	6,072	7.9										
	2006	687	0.9	4,264	5.8	308	9.1	1,746	51.8	46	31.1	140	94.6	354	10.1	1,886	53.6	1,041	1.3	6,150	7.9										
Ages < 35	1996	501	0.8	2,937	4.7	194	10.2	944	49.9	32	27.1	111	94.1	226	11.2	1,055	52.5	727	1.1	3,992	6.1										
	1997	566	0.9	3,179	5.1	214	11.0	1,030	53.0	46	27.1	153	90.0	260	12.3	1,183	55.9	826	1.3	4,362	6.8										
	1998	540	0.9	3,086	4.9	248	11.4	1,148	52.5	60	35.3	153	90.0	308	13.1	1,301	55.2	848	1.3	4,387	6.8										
	1999	569	0.9	3,082	5.0	231	10.8	1,124	52.6	49	32.9	138	92.6	280	12.3	1,262	55.2	849	1.3	4,344	6.8										
	2000	555	0.9	3,096	5.1	204	9.4	1,097	50.7	49	38.0	125	96.9	253	11.0	1,222	53.3	808	1.3	4,318	6.9										
	2001	576	1.0	3,147	5.2	235	10.7	1,156	52.4	41	31.3	120	91.6	276	11.8	1,276	54.6	852	1.4	4,423	7.0										
	2002	537	0.9	3,129	5.2	237	10.0	1,229	51.9	42	33.1	125	98.4	279	11.2	1,354	54.2	816	1.3	4,483	7.2										
	2003	539	0.9	3,161	5.3	256	10.7	1,325	55.5	38	32.2	114	96.6	294	11.7	1,439	57.5	833	1.3	4,600	7.5										
	2004	565	1.0	3,128	5.4	207	9.3	1,224	55.0	56	39.7	133	94.3	263	11.1	1,357	57.3	828	1.4	4,485	7.5										
	2005	552	1.0	3,198	5.7	215	10.3	1,149	55.1	47	46.1	100	98.0	262	12.0	1,249	57.1	814	1.4	4,447	7.6										
	2006	534	0.9	3,342	5.8	217	10.3	1,157	54.8	28	31.5	83	93.3	245	11.1	1,240	56.3	779	1.3	4,582	7.7										
Ages 35+	1996	156	1.1	737	5.4	33	4.9	320	47.1	13	19.7	56	84.8	46	6.2	376	50.5	202	1.4	1,113	7.7										
	1997	165	1.1	759	5.2	78	8.6	409	45.3	29	31.5	87	94.6	107	10.8	496	49.9	272	1.7	1,255	8.1										
	1998	150	1.0	733	4.8	50	5.5	422	46.2	22	18.6	113	95.8	72	7.0	535	51.8	222	1.4	1,268	7.8										
	1999	162	1.0	787	5.0	93	9.3	493	49.5	16	16.7	84	87.5	109	10.0	577	52.8	271	1.6	1,364	8.2										
	2000	167	1.0	790	4.9	80	7.7	506	48.6	35	31.5	97	87.4	115	10.0	603	52.3	282	1.6	1,393	8.1										
	2001	154	0.9	784	4.7	75	6.5	498	43.2	33	35.1	90	95.7	108	8.7	588	47.2	262	1.5	1,372	7.7										
	2002	161	1.0	842	5.0	105	7.9	626	47.1	26	22.4	108	93.1	131	9.1	734	50.8	292	1.6	1,576	8.6										
	2003	174	1.0	844	5.0	75	6.5	552	47.5	33	25.2	118	90.1	108	8.4	670	51.9	282	1.5	1,514	8.3										
	2004	174	1.0	886	5.2	117	9.0	655	50.2	28	27.2	98	95.1	145	10.3	753	53.5	319	1.7	1,639	8.9										
	2005	149	0.9	927	5.5	107	8.3	616	47.8	28	31.8	81	92.0	135	9.8	697	50.6	284	1.6	1,624	8.9										
	2006	151	0.9	919	5.4	89	7.1	587	46.8	18	30.5	57	96.6	107	8.1	644	49.0	258	1.4	1,563	8.6										

NOTE: All percentages are calculated based on only those births with known values for the characteristic(s) of interest, unless otherwise stated.

1. Very Low Birthweight (VLBW): less than 1,500 grams (3.3 lbs.). 2. Low Birthweight (LBW): less than 2,500 grams (5.5 lbs.).

**Figure B-11. Low Birthweight<sup>1</sup> Among Smoking and Nonsmoking<sup>2</sup> Mothers, by Race and Hispanic Ethnicity, Massachusetts: 2006**



NOTE: All percentages are calculated based on only those births with known values for the characteristic(s) of interest, unless otherwise stated. Maternal smoking is self-reported on the Parent Worksheet of the Birth Certificate; these data should be interpreted cautiously.

1. Low birthweight: less than 2,500 grams or 5.5 pounds. 2. Based on information provided on the Parent Worksheet of the Birth Certificates.

**Table B-23. Low Birthweight (LBW)<sup>1</sup> by Maternal Age, Race and Hispanic Ethnicity, Massachusetts: 2006**

Mother's Age (in years)	Total LBW Infants		White non- Hispanic		Black non- Hispanic		Hispanic		Asian		Other <sup>4</sup>		Unknown <sup>5</sup>
	n	% <sup>3</sup>	n	% <sup>3</sup>	n	% <sup>3</sup>	n	% <sup>3</sup>	n	% <sup>3</sup>	n	% <sup>3</sup>	n
State Total <sup>2</sup>	6,150	7.9	3,799	7.2	806	12.5	895	8.4	436	8.0	204	10.2	10
<18	158	11.0	47	9.1	24	11.2	71	12.1	7	11.1	9	18.0	0
18-19	293	8.8	130	8.1	48	11.9	93	8.3	8	9.5	14	10.4	0
20-24	1,049	8.5	496	7.4	164	11.5	295	9.0	47	8.2	45	10.2	2
25-29	1,380	7.4	805	6.7	195	11.6	214	7.6	104	7.2	58	9.9	4
30-34	1,702	7.2	1,165	6.6	192	13.0	132	7.2	172	8.1	39	8.6	2
35-39	1,216	8.3	916	7.8	130	13.7	69	8.0	74	7.5	27	10.5	0
40+	347	10.0	239	8.9	49	16.6	21	10.1	24	11.9	12	16.0	2

NOTE: All percentages are calculated based on only those births with known values for the characteristic(s) of interest, unless otherwise stated.

1. Low Birthweight (LBW): less than 2,500 grams or 5.5 pounds. 2. State totals include women of unknown age. 3. Percentages are based upon the number of low birthweight infants divided by the total births in each age and race/ethnicity category. 4. Other races include American Indian and others not specified. 5. Race and/or mother's age unknown.



**Table B-24. Cesarean Section Deliveries and Vaginal Births after Cesarean Section (VBACs) by  
Licensed Maternity Facility<sup>1</sup>, All Births, Massachusetts: 2006**

Facility	Occurrence Births <sup>2</sup>	Total		Primary C- Section <sup>2</sup>		Repeat C-Sections		VBACs <sup>2</sup>	
		N	% <sup>3,4</sup>	N	% <sup>3,5</sup>	N	% <sup>3,6</sup>	N	% <sup>7</sup>
<b>State Total</b>	<b>78,511</b>	<b>26,141</b>	<b>33.3</b>	<b>16,062</b>	<b>23.8</b>	<b>10,079</b>	<b>91.9</b>	<b>887</b>	<b>8.1</b>
Anna Jaques Hospital	769	225	29.3	140	20.7	85	90.4	9	9.6
Baystate Medical Center	4,291	1,299	30.4	778	21.1	521	88.2	70	11.8
Berkshire Medical Center	741	236	31.8	146	22.7	90	92.8	7	7.2
Beth Israel Deaconess Medical Center	4,948	2,038	41.2	1,344	32.1	694	91.8	62	8.2
Beverly Hospital	2,024	656	32.4	410	23.5	246	88.5	32	11.5
Boston Medical Center	2,586	795	30.8	465	20.7	330	98.2	6	1.8
Brigham and Women's Hospital	8,418	2,729	32.5	1,705	23.6	1,024	87.5	146	12.5
Brockton Hospital	1,385	541	39.1	349	29.7	192	91.9	17	8.1
Cambridge Hospital	1,310	381	29.2	223	19.8	158	87.3	23	12.7
Cape Cod Hospital	1,016	310	30.5	195	21.9	115	92.0	10	8.0
Caritas Good Samaritan Medical Center	868	361	41.6	221	30.4	140	99.3	1	-- <sup>8</sup>
Caritas Holy Family Hospital and Medical Center	1,210	533	44.0	324	32.6	209	97.2	6	2.8
Caritas Norwood Hospital	540	186	34.4	104	23.0	82	94.3	5	5.7
Caritas St. Elizabeth's Medical Center of Boston	1,312	529	40.4	317	29.4	212	92.2	18	7.8
Charlton Memorial Hospital	1,659	578	34.8	343	24.1	235	99.2	2	-- <sup>8</sup>
Cooley Dickinson Hospital	863	264	30.6	170	22.6	94	84.7	17	15.3
Emerson Hospital	1,214	465	38.3	291	28.6	174	87.9	24	12.1
Fairview Hospital	126	32	25.4	22	19.0	10	100.0	0	0.0
Falmouth Hospital	552	198	36.2	118	25.3	80	100.0	0	0.0
Franklin Medical Center	455	102	22.4	56	14.0	46	82.1	10	17.9
Harrington Memorial Hospital	406	127	31.3	71	20.3	56	98.2	1	-- <sup>8</sup>
Heywood Memorial Hospital	587	121	20.6	61	11.8	60	88.2	8	11.8
Holyoke Hospital	573	114	19.9	73	13.9	41	87.2	6	12.8
Jordan Hospital	728	217	29.8	133	20.8	84	93.3	6	6.7
Lawrence General Hospital	1,852	628	33.9	326	21.1	302	99.3	2	-- <sup>8</sup>
Leominster Hospital	1,193	305	25.6	170	16.2	135	95.1	7	4.9
Lowell General Hospital	1,979	636	32.1	397	23.1	239	92.6	19	7.4
Martha's Vineyard Hospital	156	36	23.1	22	15.5	14	100.0	0	0.0
Mary Lane Hospital	165	48	29.1	25	17.7	23	95.8	1	-- <sup>8</sup>
Massachusetts General Hospital	3,342	1,115	33.4	722	25.0	393	86.6	61	13.4
Melrose-Wakefield Hospital	1,293	518	40.1	300	27.9	218	99.5	1	-- <sup>8</sup>
Mercy Medical Center	1,377	319	23.2	191	15.5	128	89.5	15	10.5



**Table B-24 (continued). Cesarean Section Deliveries and Vaginal Births after Cesarean Section (VBACs) by Licensed Maternity Facility<sup>1</sup>, All Births, Massachusetts: 2006**

Facility	Occurrence Births <sup>2</sup>	Total		Primary C-Section <sup>2</sup>		Repeat C-Sections		VBACs <sup>2</sup>	
		N	% <sup>3,4</sup>	N	% <sup>3,5</sup>	N	% <sup>3,6</sup>	N	% <sup>7</sup>
Metrowest Medical Center-Framingham Union Campus	1,903	789	41.5	476	29.9	313	100.0	0	0.0
Milford Regional Medical Center	1,019	355	34.8	211	24.2	144	97.3	4	-- <sup>8</sup>
Morton Hospital	499	184	37.2	99	24.2	85	100.0	0	0.0
Mount Auburn Hospital	1,871	499	26.7	349	20.7	150	82.0	33	18.0
Nantucket Cottage Hospital	124	25	20.2	18	15.4	7	100.0	0	0.0
Newton Wellesley Hospital	3,379	1,258	37.2	748	26.4	510	93.1	38	6.9
North Adams Regional Hospital	325	79	24.3	45	15.6	34	94.4	2	-- <sup>8</sup>
North Shore Medical Center - Salem Hospital	1,817	574	31.6	363	22.8	211	92.5	17	7.5
Saint Vincent Hospital	1,853	508	27.4	314	19.5	194	80.2	48	19.8
Saints Memorial Medical Center	704	244	34.7	157	25.5	87	97.8	2	-- <sup>8</sup>
South Shore Hospital	3,802	1,541	40.5	965	30.4	576	91.7	52	8.3
St. Luke's Hospital	1,639	496	30.3	280	19.8	216	97.7	5	2.3
Sturdy Memorial Hospital	1,064	388	36.5	225	25.3	163	94.2	10	5.8
Tobey Hospital	432	96	22.3	51	13.4	45	91.8	4	-- <sup>8</sup>
Tufts-New England Medical Center Hospital	1,353	559	41.3	375	32.4	184	94.8	10	5.2
UMASS Memorial Medical Center - West Campus	4,346	1,212	27.9	760	19.8	452	88.8	57	11.2
Winchester Hospital	1,904	690	36.5	412	25.5	278	99.3	2	-- <sup>8</sup>

NOTES: All percentages are calculated based on only those births with known values for the characteristic(s) of interest, unless otherwise stated.

1. A licensed maternity facility is a medical unit licensed by the Commonwealth for the care of women during pregnancy and childbirth. 2. See Section Definitions for an explanation of occurrence births, primary and repeat Cesarean sections, and VBACs. The percentages provided in this table are based on occurrence births, and may differ from data which are based on resident births, presented elsewhere in this book. 3. The percentage of Cesarean births reported is not adjusted for risk factors such as mother's age, birthweight, or complications of labor and delivery, which would influence the number of procedures in a particular facility. Caution should be used when comparing unadjusted percentages. 4. Percentage of total Cesarean sections= (total Cesarean births/all births) x 100. 5. Percentage primary Cesarean sections= (primary Cesarean sections/all births-repeat Cesarean sections-VBACs) x 100. 6. Percentage repeat Cesarean sections= (repeat Cesarean sections/ (repeat Cesarean sections + VBACs)) x100. 7. Percentage VBACs= (VBAC deliveries/ (repeat Cesarean sections + VBAC)) x 100. 8. Calculations based on values of 1-4 are excluded.

**Table B-25. Cesarean Section Deliveries for Singleton Births by Licensed Maternity Facility and Number of Previous Births, Massachusetts: 2006**

Facility <sup>1</sup>	<u>First Birth</u>			<u>Second or Later Birth without prior C-section</u>			<u>Second or Later Birth with prior C-section</u>		
	Births <sup>2</sup>	C-section		Births <sup>2</sup>	C-section		Births <sup>2</sup>	C-section	
		n	% <sup>3</sup>		n	% <sup>3</sup>		n	% <sup>3</sup>
State Total	33,811	10,829	32.0	30,553	3,036	9.9	10,393	9,525	91.6
Anna Jaques Hospital	334	93	27.8	311	21	6.8	92	83	90.2
Baystate Medical Center	1,729	472	27.3	1,730	165	9.5	550	480	87.3
Berkshire Medical Center	310	106	34.2	310	28	9.0	96	89	92.7
Beth Israel Deaconess Medical Center	2,199	890	40.5	1,691	186	11.0	719	658	91.5
Beverly Hospital	854	298	34.9	820	60	7.3	261	229	87.7
Boston Medical Center	1,068	296	27.7	1,130	129	11.4	316	312	98.7
Brigham and Women's Hospital	3,622	1,035	28.6	3,074	281	9.1	1,029	890	86.5
Brockton Hospital	608	260	42.8	542	70	12.9	203	186	91.6
Cambridge Hospital	675	171	25.3	430	41	9.5	181	158	87.3
Cape Cod Hospital	447	127	28.4	392	35	8.9	121	111	91.7
Caritas Good Samaritan Medical Center	309	138	44.7	394	64	16.2	132	131	99.2
Caritas Holy Family Hospital and Medical Center	478	212	44.4	480	78	16.3	209	203	97.1
Caritas Norwood Hospital	243	80	32.9	206	22	10.7	83	78	94.0
Caritas St. Elizabeth's Medical Center of Boston	567	207	36.5	436	51	11.7	210	192	91.4
Charlton Memorial Hospital	702	230	32.8	685	94	13.7	224	222	99.1
Cooley Dickinson Hospital	408	134	32.8	320	24	7.5	111	94	84.7
Emerson Hospital	499	208	41.7	473	49	10.4	192	168	87.5
Fairview Hospital	55	17	30.9	61	5	8.2	10	10	100.0
Falmouth Hospital	211	71	33.6	235	32	13.6	77	77	100.0
Franklin Medical Center	199	36	18.1	188	12	6.4	56	46	82.1
Harrington Memorial Hospital	172	48	27.9	173	19	11.0	55	54	98.2
Heywood Memorial Hospital	241	53	22.0	270	6	2.2	64	56	87.5
Holyoke Hospital	251	55	21.9	262	16	6.1	47	41	87.2
Jordan Hospital	339	104	30.7	283	19	6.7	90	84	93.3
Lawrence General Hospital	772	211	27.3	727	81	11.1	297	295	99.3
Leominster Hospital	516	102	19.8	516	51	9.9	138	131	94.9
Lowell General Hospital	827	264	31.9	854	103	12.1	254	235	92.5
Martha's Vineyard Hospital	86	18	20.9	52	2	-- <sup>4</sup>	14	14	100.0
Mary Lane Hospital	73	14	19.2	68	11	16.2	24	23	95.8
Massachusetts General Hospital	1,537	498	32.4	1,198	113	9.4	427	370	86.7
Melrose-Wakefield Hospital	581	216	37.2	460	61	13.3	214	213	99.5
Mercy Medical Center	570	134	23.5	648	51	7.9	135	120	88.9
Metrowest Medical Center-Framingham Union Campus	852	379	44.5	687	56	8.2	301	301	100.0
Milford Regional Medical Center	437	153	35.0	405	43	10.6	142	138	97.2
Morton Hospital	223	71	31.8	175	19	10.9	85	85	100.0
Mount Auburn Hospital	964	259	26.9	666	56	8.4	179	147	82.1

**Table B-25 (continued). Cesarean Section Deliveries for Singleton Births by Licensed Maternity Facility and Number of Previous Births, Massachusetts: 2006**

Facility <sup>1</sup>	First Birth			Second or Later Birth without prior C-section			Second or Later Birth with prior C-section		
	Births <sup>2</sup>	C-section		Births <sup>2</sup>	C-section		Births <sup>2</sup>	C-section	
		n	% <sup>3</sup>		n	% <sup>3</sup>		n	% <sup>3</sup>
Nantucket Cottage Hospital	59	14	23.7	58	4	-- <sup>4</sup>	7	7	100.0
Newton Wellesley Hospital	1,443	542	37.6	1,234	93	7.5	532	494	92.9
North Adams Regional Hospital	142	34	23.9	133	6	4.5	36	34	94.4
North Shore Medical Center - Salem Hospital	777	248	31.9	758	77	10.2	219	202	92.2
Saint Vincent Hospital	823	218	26.5	736	60	8.2	231	183	79.2
Saints Memorial Medical Ctr.-St. John's Campus	324	116	35.8	277	31	11.2	87	85	97.7
South Shore Hospital	1,550	622	40.1	1,416	165	11.7	608	556	91.4
St. Luke's Hospital	651	189	29.0	743	80	10.8	211	206	97.6
Sturdy Memorial Hospital	443	166	37.5	410	34	8.3	169	159	94.1
Tobey Hospital	181	32	17.7	188	13	6.9	49	45	91.8
Tufts-New England Medical Center Hospital	558	216	38.7	483	83	17.2	169	159	94.1
UMASS Memorial Medical Center - West Campus	1,982	505	25.5	1,678	159	9.5	462	409	88.5
Winchester Hospital	774	266	34.4	754	76	10.1	264	262	99.2

NOTES: All percentages are calculated based on only those births with known values for the characteristic(s) of interest, unless otherwise stated.

1. A licensed maternity facility is a medical unit licensed by the Commonwealth for the care of women during pregnancy and childbirth. 2. See Section Definitions for an explanation of occurrence births. 3. The percentage of Cesarean births reported is not adjusted for risk factors such as mother's age, birthweight, or complications of labor and delivery, which would influence the number of procedures in a particular facility. Caution should be used when comparing unadjusted percentages. 4. Calculations based on values of 1-4 are excluded.



**Table B-26A. Birth Characteristics<sup>1</sup>: Occurrence and Resident Births and Infant Deaths,  
Massachusetts Municipalities: 2006**

Community	Resident Births <sup>3</sup>	Low Birthweight <sup>4</sup>	Teen Births (15-19 years)	Infant Deaths <sup>5</sup>	Neonatal Deaths <sup>6</sup>	Fetal Deaths <sup>7</sup>
<b>STATE TOTAL</b>	<b>77,670</b>	<b>6,150</b>	<b>4,722</b>	<b>369</b>	<b>279</b>	<b>388</b>
Abington	226	25	--	1	1	--
Acton	194	13	--	1	1	--
Acushnet	95	--	5	0	0	--
Adams	88	14	7	0	0	--
Agawam	245	11	10	0	0	0
Alford	2	0	0	0	0	0
Amesbury	228	15	13	2	2	--
Amherst	184	7	9	0	0	--
Andover	269	20	--	0	0	--
Aquinnah (Gay Head)	5	--	--	0	0	0
Arlington	568	40	--	0	0	--
Ashburnham	64	5	--	0	0	--
Ashby	31	--	--	0	0	--
Ashfield	14	--	0	0	0	0
Ashland	247	18	7	1	1	--
Athol	153	11	18	0	0	--
Attleboro	606	39	27	2	2	--
Auburn	170	12	7	2	2	0
Avon	48	--	--	0	0	0
Ayer	93	10	--	1	1	--
Barnstable	492	35	29	0	0	--
Barre	53	0	--	1	1	--
Becket	11	0	0	0	0	--
Bedford	115	8	--	0	0	--
Belchertown	160	15	5	1	1	--
Bellingham	208	17	--	0	0	--
Belmont	266	17	--	1	1	0
Berkley	55	0	--	0	0	0
Berlin	34	--	0	0	0	0
Bernardston	22	--	--	0	0	--
Beverly	399	33	6	2	2	--
Billerica	447	35	13	1	1	--
Blackstone	110	10	13	1	1	0
Blandford	7	--	--	0	0	0
Bolton	50	10	0	0	0	0
Boston	7,912	710	568	46	35	39
Bourne	189	8	11	1	0	--
Boxborough	48	--	0	0	0	0
Boxford	60	--	--	0	0	--
Boylston	60	6	0	0	0	0
Braintree	409	30	12	1	0	--
Brewster	60	--	--	0	0	0
Bridgewater	234	11	10	0	0	--
Brimfield	37	--	0	1	1	0



**Table B-26A (continued). Birth Characteristics: Occurrence and Resident Births and Infant Deaths, Massachusetts Municipalities: 2006**

Community	Occurrence Births <sup>2</sup>	Resident Births <sup>3</sup>	Low Birthweight <sup>4</sup>	Teen Births (15-19 years)	Infant Deaths <sup>5</sup>	Neonatal Deaths <sup>6</sup>	Fetal Deaths <sup>7</sup>
Brockton	2,258	1,538	177	156	12	8	9
Brookfield	0	25	--	--	0	0	--
Brookline	1	691	41	--	0	0	--
Buckland	2	14	0	0	0	0	0
Burlington	0	265	18	--	2	2	--
Cambridge	3,305	1,145	73	32	6	5	--
Canton	0	204	16	--	1	1	--
Carlisle	1	30	6	0	0	0	0
Carver	0	120	9	6	1	1	0
Charlemont	0	8	--	--	0	0	0
Charlton	2	140	11	6	1	1	0
Chatham	0	35	--	0	0	0	0
Chelmsford	0	361	27	--	5	4	--
Chelsea	3	752	59	79	2	2	--
Cheshire	0	35	--	--	0	0	0
Chester	0	16	0	0	0	0	0
Chesterfield	0	15	0	0	0	0	0
Chicopee	1	611	45	58	1	1	5
Chilmark	2	12	0	0	0	0	0
Clarksburg	0	14	7	--	0	0	0
Clinton	0	198	15	17	0	0	--
Cohasset	0	74	6	0	0	0	0
Colrain	1	13	0	--	0	0	0
Concord	1,216	124	--	0	0	0	--
Conway	0	20	--	--	0	0	0
Cummington	0	3	0	0	0	0	0
Dalton	1	58	6	--	0	0	0
Danvers	1	235	11	6	0	0	--
Dartmouth	0	238	27	10	4	4	0
Dedham	0	276	25	5	0	0	--
Deerfield	2	47	--	--	0	0	0
Dennis	1	109	10	9	0	0	0
Dighton	0	65	--	--	1	0	0
Douglas	0	121	7	5	1	0	0
Dover	0	43	--	0	0	0	0
Dracut	1	375	27	14	2	1	--
Dudley	0	91	7	6	0	0	0
Dunstable	0	20	0	0	0	0	0
Duxbury	0	114	6	5	0	0	--
East Bridgewater	0	152	15	7	1	1	--
East Brookfield	0	21	--	--	0	0	0
East Longmeadow	0	129	13	--	1	1	0
Eastham	0	36	--	--	0	0	0
Easthampton	2	143	--	11	0	0	--
Easton	0	230	20	--	0	0	--
Edgartown	0	40	0	--	0	0	0
Egremont	0	7	0	0	0	0	0

**Table B-26A (continued). Birth Characteristics: Occurrence and Resident Births and Infant Deaths, Massachusetts Municipalities: 2006**

Community	Occurrence Births <sup>2</sup>	Resident Births <sup>3</sup>	Low Birthweight <sup>4</sup>	Teen Births (15-19 years)	Infant Deaths <sup>5</sup>	Neonatal Deaths <sup>6</sup>	Fetal Deaths <sup>7</sup>
Erving	0	25	--	0	0	0	0
Essex	0	31	--	--	0	0	0
Everett	1	640	59	37	4	3	6
Fairhaven	0	156	10	8	0	0	--
Fall River	1,664	1,212	127	146	6	5	8
Falmouth	554	271	28	21	0	0	--
Fitchburg	3	625	47	91	4	2	--
Florida	0	14	0	0	0	0	0
Foxborough	0	169	15	--	0	0	--
Framingham	1,905	971	87	65	3	2	5
Franklin	2	372	32	--	0	0	--
Freetown	0	79	12	5	3	1	0
Gardner	590	259	13	23	0	0	0
Georgetown	0	81	9	0	0	0	0
Gill	0	7	--	0	0	0	0
Gloucester	1	308	27	19	0	0	--
Goshen	0	4	0	0	0	0	0
Gosnold	0	0	0	0	0	0	0
Grafton	0	259	19	6	1	1	--
Granby	0	44	--	--	0	0	0
Granville	0	14	0	--	0	0	0
Great Barrington	127	44	--	--	0	0	--
Greenfield	456	186	17	19	0	0	--
Groton	2	102	--	0	0	0	0
Groveland	0	67	--	0	0	0	0
Hadley	0	39	5	--	0	0	0
Halifax	0	67	--	--	1	1	0
Hamilton	0	93	13	--	0	0	0
Hampden	0	29	--	0	0	0	0
Hancock	0	13	--	0	0	0	0
Hanover	1	150	14	0	0	0	--
Hanson	0	92	6	--	1	1	0
Hardwick	0	32	--	--	0	0	0
Harvard	0	30	0	0	0	0	0
Harwich	0	100	7	--	0	0	0
Hatfield	1	17	0	0	0	0	0
Haverhill	8	904	95	73	6	5	7
Hawley	0	2	0	0	0	0	0
Heath	1	7	0	0	0	0	0
Hingham	1	238	7	--	0	0	0
Hinsdale	0	18	--	--	0	0	0
Holbrook	1	134	7	9	1	1	0
Holden	0	179	8	--	2	0	0
Holland	0	19	--	--	0	0	0
Holliston	0	159	9	--	0	0	0
Holyoke	577	656	53	143	7	6	--
Hopedale	1	60	--	0	0	0	0

**Table B-26A (continued). Birth Characteristics: Occurrence and Resident Births and Infant Deaths, Massachusetts Municipalities: 2006**

Community	Occurrence Births <sup>2</sup>	Resident Births <sup>3</sup>	Low Birthweight <sup>4</sup>	Teen Births (15-19 years)	Infant Deaths <sup>5</sup>	Neonatal Deaths <sup>6</sup>	Fetal Deaths <sup>7</sup>
Hopkinton	0	172	5	--	1	0	--
Hubbardston	0	36	--	--	0	0	0
Hudson	0	229	18	10	0	0	--
Hull	1	100	11	--	1	1	0
Huntington	0	26	--	--	0	0	0
Ipswich	0	122	9	--	0	0	0
Kingston	0	135	16	--	1	1	0
Lakeville	0	134	18	5	0	0	0
Lancaster	1	73	6	--	1	1	0
Lanesborough	0	22	--	0	0	0	0
Lawrence	1,857	1,460	115	244	9	6	7
Lee	2	47	--	--	0	0	--
Leicester	0	101	10	6	1	1	0
Lenox	0	26	0	--	0	0	0
Leominster	1,195	532	32	38	5	4	5
Leverett	1	8	0	0	0	0	0
Lexington	0	189	6	--	0	0	0
Leyden	0	5	0	--	0	0	0
Lincoln	0	85	--	--	0	0	0
Littleton	0	115	9	--	0	0	--
Longmeadow	0	130	12	0	0	0	0
Lowell	2,685	1,817	165	202	9	8	8
Ludlow	0	199	16	16	4	4	0
Lunenburg	0	98	6	--	0	0	--
Lynn	3	1491	131	147	7	7	7
Lynnfield	0	79	11	0	1	1	0
Malden	2	843	63	28	7	6	5
Manchester-by-the-Sea	0	43	--	0	0	0	0
Mansfield	0	278	18	6	0	0	--
Marblehead	0	192	10	0	0	0	--
Marion	1	49	5	--	0	0	0
Marlborough	2	569	57	28	6	5	--
Marshfield	0	292	26	11	3	2	0
Mashpee	0	138	9	13	3	2	--
Mattapoisett	0	37	--	--	0	0	0
Maynard	2	173	17	--	0	0	0
Medfield	0	116	7	0	0	0	0
Medford	4	665	48	15	4	4	--
Medway	0	143	11	--	0	0	--
Melrose	1,293	293	12	--	3	2	--
Mendon	1	54	--	--	1	1	0
Merrimac	1	59	--	--	1	1	0
Methuen	1,213	577	39	29	1	1	--
Middleborough	3	268	32	20	3	2	--
Middlefield	0	4	0	--	0	0	0
Middleton	0	68	--	0	0	0	0
Milford	1,021	435	42	13	2	1	5



Table B-26A (continued). Birth Characteristics: Occurrence and Resident Births and Infant Deaths, Massachusetts Municipalities: 2006

Community	Occurrence Births <sup>2</sup>	Resident Births <sup>3</sup>	Low Birthweight <sup>4</sup>	Teen Births (15-19 years)	Infant Deaths <sup>5</sup>	Neonatal Deaths <sup>6</sup>	Fetal Deaths <sup>7</sup>
Millbury	0	123	--	5	1	0	0
Millis	0	100	6	--	0	0	0
Millville	0	36	--	--	0	0	0
Milton	0	296	17	--	0	0	--
Monroe	0	2	0	0	0	0	0
Monson	0	67	--	--	0	0	0
Montague	6	88	--	--	0	0	--
Monterey	0	6	0	0	0	0	0
Montgomery	0	3	--	0	0	0	0
Mount Washington	0	0	0	0	0	0	0
Nahant	0	24	--	0	0	0	0
Nantucket	127	145	5	--	0	0	--
Natick	5	427	26	--	1	1	--
Needham	3	325	14	0	0	0	--
New Ashford	0	1	0	0	0	0	0
New Bedford	1,641	1,460	154	207	13	9	7
New Braintree	0	6	0	0	0	0	0
New Marlborough	0	11	0	--	0	0	--
New Salem	0	8	0	0	0	0	0
Newbury	1	70	7	--	1	1	0
Newburyport	771	180	18	11	0	0	0
Newton	3,381	812	62	8	3	3	--
Norfolk	0	103	6	--	1	0	--
North Adams	325	182	18	20	0	0	--
North Andover	0	297	20	6	2	1	0
North Attleboro	0	363	27	8	0	0	0
North Brookfield	0	46	--	6	0	0	0
North Reading	0	141	17	0	0	0	0
Northampton	871	219	15	11	0	0	--
Northborough	0	136	9	--	1	1	--
Northbridge	2	221	25	11	1	1	0
Northfield	0	24	--	--	0	0	0
Norton	0	202	14	6	0	0	0
Norwell	0	104	11	0	0	0	0
Norwood	544	364	30	10	2	1	0
Oak Bluffs	156	52	--	--	0	0	0
Oakham	0	17	0	0	0	0	0
Orange	2	91	0	11	0	0	0
Orleans	0	17	0	0	0	0	0
Otis	0	10	--	--	0	0	0
Oxford	2	161	6	12	0	0	0
Palmer	1	124	7	15	1	0	--
Paxton	2	57	--	--	0	0	0
Peabody	0	504	32	15	3	2	--
Pelham	0	7	0	0	0	0	0
Pembroke	0	213	16	7	0	0	--



**Table B-26A (continued). Birth Characteristics: Occurrence and Resident Births and Infant Deaths, Massachusetts Municipalities: 2006**

Community	Occurrence Births <sup>2</sup>	Resident Births <sup>3</sup>	Low Birthweight <sup>4</sup>	Teen Births (15-19 years)	Infant Deaths <sup>5</sup>	Neonatal Deaths <sup>6</sup>	Fetal Deaths <sup>7</sup>
Pepperell	2	118	11	5	1	1	0
Peru	0	8	0	0	0	0	0
Petersham	1	8	0	0	0	0	0
Phillipston	0	19	--	--	0	0	0
Pittsfield	741	497	37	63	0	0	5
Plainfield	0	6	0	--	0	0	0
Plainville	0	119	9	5	0	0	--
Plymouth	732	729	46	30	4	1	5
Plympton	0	28	6	0	0	0	0
Princeton	1	21	--	0	0	0	0
Provincetown	0	15	--	0	0	0	0
Quincy	1	1,161	82	22	4	3	--
Randolph	1	421	37	18	1	1	5
Raynham	1	139	12	--	0	0	0
Reading	2	255	11	--	0	0	0
Rehoboth	0	104	--	--	1	0	0
Revere	1	686	65	39	8	7	--
Richmond	0	6	0	0	0	0	0
Rochester	0	53	5	0	0	0	0
Rockland	0	205	15	6	3	2	--
Rockport	0	45	--	--	1	1	0
Rowe	0	4	0	0	0	0	0
Rowley	0	64	9	--	0	0	0
Royalston	0	15	0	--	0	0	0
Russell	2	21	--	0	0	0	0
Rutland	0	101	7	--	1	1	--
Salem	1,819	523	35	28	2	2	--
Salisbury	0	64	5	7	0	0	0
Sandisfield	0	3	0	0	0	0	0
Sandwich	0	192	15	7	2	0	0
Saugus	0	263	20	7	1	1	--
Savoy	0	4	0	0	0	0	0
Scituate	0	162	11	--	1	1	0
Seekonk	0	119	8	--	1	1	0
Sharon	0	140	15	--	0	0	--
Sheffield	0	21	0	--	0	0	0
Shelburne	0	14	0	0	0	0	0
Sherborn	0	27	--	0	0	0	0
Shirley	0	72	--	--	0	0	0
Shrewsbury	1	396	31	--	3	2	--
Shutesbury	1	14	0	0	0	0	0
Somerset	0	178	12	8	2	1	--
Somerville	4	863	64	34	4	3	--
South Hadley	1	140	12	--	0	0	0
Southampton	0	42	--	--	0	0	0

**Table B-26A (continued). Birth Characteristics: Occurrence and Resident Births and Infant Deaths, Massachusetts Municipalities: 2006**

Community	Occurrence Births <sup>2</sup>	Resident Births <sup>3</sup>	Low Birthweight <sup>4</sup>	Teen Births (15-19 years)	Infant Deaths <sup>5</sup>	Neonatal Deaths <sup>6</sup>	Fetal Deaths <sup>7</sup>
Southborough	0	120	6	0	2	2	--
Southbridge	407	265	27	36	2	2	--
Southwick	0	74	--	--	0	0	0
Spencer	0	122	8	7	1	0	--
Springfield	5,679	2,523	274	490	23	14	16
Sterling	0	74	6	0	0	0	0
Stockbridge	1	16	--	--	0	0	0
Stoneham	2	202	16	--	2	1	0
Stoughton	2	298	37	7	0	0	--
Stow	0	81	--	--	0	0	0
Sturbridge	1	85	--	--	0	0	0
Sudbury	2	160	8	0	0	0	0
Sunderland	0	26	--	--	0	0	0
Sutton	2	96	5	0	0	0	--
Swampscott	1	139	6	0	0	0	0
Swansea	0	131	--	--	1	0	0
Taunton	502	784	67	53	5	4	9
Templeton	0	77	5	6	0	0	--
Tewksbury	1	313	20	6	0	0	--
Tisbury	0	48	--	--	0	0	0
Tolland	0	1	0	0	0	0	0
Topsfield	0	54	--	0	0	0	0
Townsend	1	83	--	--	0	0	--
Truro	0	14	--	0	0	0	0
Tyngsborough	1	120	9	--	0	0	0
Tyringham	0	2	0	0	0	0	0
Upton	1	81	6	--	0	0	0
Uxbridge	0	180	16	5	0	0	0
Wakefield	0	262	24	5	0	0	0
Wales	0	20	0	--	0	0	0
Walpole	0	258	13	--	1	1	--
Waltham	0	764	62	24	5	4	6
Ware	167	133	--	13	1	1	--
Wareham	436	213	11	18	0	0	--
Warren	1	45	--	--	0	0	0
Warwick	0	6	0	0	0	0	0
Washington	0	7	--	--	0	0	0
Watertown	1	403	36	7	0	0	0
Wayland	0	129	6	0	0	0	--
Webster	1	211	14	13	1	1	--
Wellesley	1	273	31	--	0	0	0
Wellfleet	0	12	--	0	1	1	0
Wendell	0	11	--	0	1	1	0
Wenham	0	30	--	0	0	0	0
West Boylston	0	51	--	--	2	1	--
West Bridgewater	0	59	5	0	0	0	0

**Table B-26A (continued). Birth Characteristics: Occurrence and Resident Births and Infant Deaths, Massachusetts Municipalities: 2006**

Community	Occurrence Births <sup>2</sup>	Resident Births <sup>3</sup>	Low Birthweight <sup>4</sup>	Teen Births (15-19 years)	Infant Deaths <sup>5</sup>	Neonatal Deaths <sup>6</sup>	Fetal Deaths <sup>7</sup>
West Brookfield	0	33	6	--	0	0	0
West Newbury	0	39	--	0	0	0	0
West Springfield	0	351	29	29	2	2	--
West Stockbridge	0	9	--	--	0	0	0
West Tisbury	2	18	0	--	0	0	--
Westborough	1	252	19	--	0	0	--
Westfield	2	419	19	28	1	1	--
Westford	0	204	17	--	0	0	--
Westhampton	0	14	0	--	0	0	0
Westminster	0	73	--	5	0	0	0
Weston	0	76	7	0	0	0	0
Westport	0	143	11	--	0	0	--
Westwood	0	160	9	0	0	0	0
Weymouth	3,803	654	61	27	6	4	0
Whately	0	9	--	0	0	0	--
Whitman	1	196	6	11	1	0	0
Wilbraham	0	97	7	--	0	0	0
Williamsburg	0	25	--	--	0	0	0
Williamstown	1	54	--	0	0	0	0
Wilmington	0	255	21	5	0	0	0
Winchendon	1	121	8	11	0	0	--
Winchester	1,907	212	10	--	1	1	--
Windsor	0	4	0	0	0	0	0
Winthrop	0	148	6	--	1	0	0
Woburn	1	465	35	11	5	5	--
Worcester	6,210	2,596	201	242	13	10	17
Worthington	0	9	0	0	0	0	0
Wrentham	0	137	11	--	0	0	--
Yarmouth	1	225	19	18	1	1	--
Unknown	0	0	0	0	0	0	--

-- Due to small numbers for births (n=1-4), exact count not provided.

1. Values of 1-4 for medical characteristics of communities with less than 200 births are suppressed based on Guidelines for Release of Birth Data, Bureau of Health Information, Statistics, Research and Evaluation, Massachusetts Department of Public Health. 2. Births occurring in a geographical place (state, city/town) regardless of the residency of the mother. 3. Births to mothers who report their usual place of residence as a particular geographical place (state, or city/town). 4. Less than 2,500 grams (5.5 lbs.). 5. Death of a child whose age is less than one year. 6. Death of a child whose age is less than 28 days. 7. A stillbirth delivered, extracted or expelled at 20 weeks gestation or more or weighs 350 grams or more. When the number of fetal deaths is between 1 and 4, it is suppressed.



**Table B-26B. Birth Characteristics: Occurrence and Resident Births and Infant Deaths by County, Massachusetts: 2006**

County	Occurrence Births <sup>1</sup>	Resident Births <sup>2</sup>			Resident Deaths		
		Number	Low Birthweight <sup>3</sup>	Teen Births (15-19 years)	Infant Deaths <sup>4</sup>	Neonatal Deaths <sup>5</sup>	Fetal Deaths <sup>6</sup>
<b>STATE TOTAL</b>	78,511	77,670	6,150	4,722	369	279	388
Barnstable	1,576	1,905	143	113	8	4	7
Berkshire	1,198	1,240	100	110	0	0	13
Bristol	4,874	6,637	570	514	39	27	37
Dukes	160	175	-- <sup>7</sup>	10	0	0	-- <sup>8</sup>
Essex	7,785	9,062	720	627	39	33	41
Franklin	473	675	39	48	1	1	7
Hampden	6,263	5,792	499	805	41	30	29
Hampshire	1,049	1,234	73	66	2	2	6
Middlesex	15,736	17,795	1,335	609	79	66	84
Nantucket	127	145	5	-- <sup>7</sup>	0	0	--
Norfolk	4,361	7,696	592	145	18	12	33
Plymouth	3,436	5,908	513	313	34	23	28
Suffolk	22,019	9,498	840	690	57	44	44
Worcester	9,454	9,908	717	668	51	37	55

1. Births occurring in a geographical place (state, city/town) regardless of the residency of the mother. 2. Births to mothers who report their usual place of residence as a particular geographical place (state, or city/town). 3. Less than 2,500 grams (5.5 lbs.). 4. Death of a child whose age is less than one year. 5. Death of a child whose age is less than 28 days. 6. A stillbirth delivered, extracted or expelled at 20 weeks gestation or more or weighs 350 grams or more. 7. Births between 1-4 are suppressed. 8. When the number of fetal deaths is between 1-4, it is suppressed.



**Table B-26C. Birth Characteristics, Occurrence and Resident Births and Infant Deaths, Massachusetts Community Health Network Areas (CHNAs), Massachusetts: 2006**

Community Health Network Area	Occurrence Births <sup>1</sup>	Resident Births <sup>2</sup>			Resident Deaths		
		Number	LBW <sup>3</sup>	Teen Births (15-19 years)	Infant <sup>4</sup>	Neonatal <sup>5</sup>	Fetal <sup>6</sup>
<b>STATE TOTAL</b>	<b>78,511</b>	<b>77,670</b>	<b>6,150</b>	<b>4,722</b>	<b>369</b>	<b>279</b>	<b>388</b>
Community Health Network of Berkshire County	1,198	1,240	100	110	0	0	13
Upper Valley Health Web (Franklin County)	476	870	51	71	1	1	9
Partnership for Health in Hampshire County (Northampton)	1,049	1,208	71	62	2	2	6
The Community Health Connection (Springfield)	5,682	3,815	364	558	27	17	20
Community Health Network of Southern Worcester County	415	1,321	91	99	6	5	6
Community Partners for Health (Milford)	1,031	2,117	182	62	6	4	12
Community Health Network of Greater Metro West (Framingham)	1,918	4,854	357	142	17	13	27
Community Wellness Coalition (Worcester)	6,216	3,992	293	276	25	17	20
Fitchburg/Gardner Community Health Network	1,797	3,073	200	225	14	11	21
Greater Lowell Community Health Network	2,689	3,657	300	244	17	14	19
Greater Lawrence Community Health Network	3,072	2,671	198	280	12	8	12
Greater Haverhill Community Health Network	781	1,816	171	110	10	9	10
Community Health Network North (Beverly/Gloucester)	2,108	1,125	94	34	3	3	7
North Shore Community Health Network	1,824	3,450	257	203	14	13	16
Greater Woburn/Concord/Littleton Community Health Network	3,127	2,097	135	28	9	9	13
North Suburban Health Alliance (Medford/Malden/Melrose)	1,304	3,301	250	94	20	16	16
Greater Cambridge/Somerville Community Health Network	3,313	3,245	230	78	11	9	8
West Suburban Health Network (Newton/Waltham)	3,385	2,729	214	39	8	7	10
Alliance for Community Health (Boston/Chelsea/Revere/Winthrop)	22,020	10,189	881	694	57	44	48
Blue Hills Community Health Alliance (Greater Quincy)	4,352	4,327	334	97	17	12	13
Four (For) Communities (Holyoke, Chicopee, Ludlow, Westfield)	580	1,927	135	249	13	12	9
Greater Brockton Community Health Network	2,264	3,115	306	206	16	11	17
South Shore Community Partners in Prevention (Plymouth)	733	2,145	161	74	14	9	11
Greater Attleboro-Taunton Health & Education Response	1,572	3,117	242	142	13	9	15
Partners for a Healthier Community (Fall River)	1,664	1,664	153	160	9	6	11
Greater New Bedford Health & Human Services Coalition	2,078	2,380	228	258	20	14	12
Cape and Islands Community Health Network	1,863	2,225	152	127	8	4	9

1. Births occurring in a geographical place (state, city/town) regardless of the residency of the mother. 2. Births to mothers who report their usual place of residence as a particular geographical place (state, city/town). 3. Less than 2,500 grams (5.5 lbs.). 4. Death of a child whose age is less than one year. 5. Death of a child whose age is less than 28 days. 6. A stillbirth delivered, extracted or expulsed at 20 weeks gestation or more or weighs 350 grams or more. 7. When the number of fetal deaths is between 1-4, it is suppressed.



## DEATHS

1910		1911		1912		1913		1914		1915		1916		1917		1918		1919		1920		1921		1922		1923		1924		1925		1926		1927		1928		1929		1930		1931		1932		1933		1934		1935		1936		1937		1938		1939		1940		1941		1942		1943		1944		1945		1946		1947		1948		1949		1950		1951		1952		1953		1954		1955		1956		1957		1958		1959		1960		1961		1962		1963		1964		1965		1966		1967		1968		1969		1970		1971		1972		1973		1974		1975		1976		1977		1978		1979		1980		1981		1982		1983		1984		1985		1986		1987		1988		1989		1990		1991		1992		1993		1994		1995		1996		1997		1998		1999		2000		2001		2002		2003		2004		2005		2006		2007		2008		2009		2010		2011		2012		2013		2014		2015		2016		2017		2018		2019		2020		2021		2022		2023		2024		2025		2026		2027		2028		2029		2030		2031		2032		2033		2034		2035		2036		2037		2038		2039		2040		2041		2042		2043		2044		2045		2046		2047		2048		2049		2050		2051		2052		2053		2054		2055		2056		2057		2058		2059		2060		2061		2062		2063		2064		2065		2066		2067		2068		2069		2070		2071		2072		2073		2074		2075		2076		2077		2078		2079		2080		2081		2082		2083		2084		2085		2086		2087		2088		2089		2090		2091		2092		2093		2094		2095		2096		2097		2098		2099		2100		2101		2102		2103		2104		2105		2106		2107		2108		2109		2110		2111		2112		2113		2114		2115		2116		2117		2118		2119		2120		2121		2122		2123		2124		2125		2126		2127		2128		2129		2130		2131		2132		2133		2134		2135		2136		2137		2138		2139		2140		2141		2142		2143		2144		2145		2146		2147		2148		2149		2150		2151		2152		2153		2154		2155		2156		2157		2158		2159		2160		2161		2162		2163		2164		2165		2166		2167		2168		2169		2170		2171		2172		2173		2174		2175		2176		2177		2178		2179		2180		2181		2182		2183		2184		2185		2186		2187		2188		2189		2190		2191		2192		2193		2194		2195		2196		2197		2198		2199		2200		2201		2202		2203		2204		2205		2206		2207		2208		2209		2210		2211		2212		2213		2214		2215		2216		2217		2218		2219		2220		2221		2222		2223		2224		2225		2226		2227		2228		2229		2230		2231		2232		2233		2234		2235		2236		2237		2238		2239		2240		2241		2242		2243		2244		2245		2246		2247		2248		2249		2250		2251		2252		2253		2254		2255		2256		2257		2258		2259		2260		2261		2262		2263		2264		2265		2266		2267		2268		2269		2270		2271		2272		2273		2274		2275		2276		2277		2278		2279		2280		2281		2282		2283		2284		2285		2286		2287		2288		2289		2290		2291		2292		2293		2294		2295		2296		2297		2298		2299		2300		2301		2302		2303		2304		2305		2306		2307		2308		2309		2310		2311		2312		2313		2314		2315		2316		2317		2318		2319		2320		2321		2322		2323		2324		2325		2326		2327		2328		2329		2330		2331		2332		2333		2334		2335		2336		2337		2338		2339		2340		2341		2342		2343		2344		2345		2346		2347		2348		2349		2350		2351		2352		2353		2354		2355		2356		2357		2358		2359		2360		2361		2362		2363		2364		2365		2366		2367		2368		2369		2370		2371		2372		2373		2374		2375		2376		2377		2378		2379		2380		2381		2382		2383		2384		2385		2386		2387		2388		2389		2390		2391		2392		2393		2394		2395		2396		2397		2398		2399		2400		2401		2402		2403		2404		2405		2406		2407		2408		2409		2410		2411		2412		2413		2414		2415		2416		2417		2418		2419		2420		2421		2422		2423		2424		2425		2426		2427		2428		2429		2430		2431		2432		2433		2434		2435		2436		2437		2438		2439		2440		2441		2442		2443		2444		2445		2446		2447		2448		2449		2450		2451		2452		2453		2454		2455		2456		2457		2458		2459		2460		2461		2462		2463		2464		2465		2466		2467		2468		2469		2470		2471		2472		2473		2474		2475		2476		2477		2478		2479		2480		2481		2482		2483		2484		2485		2486		2487		2488		2489		2490		2491		2492		2493		2494		2495		2496		2497		2498		2499		2500		2501		2502		2503		2504		2505		2506		2507		2508		2509		2510		2511		2512		2513		2514		2515		2516		2517		2518		2519		2520		2521		2522		2523		2524		2525		2526		2527		2528		2529		2530		2531		2532		2533		2534		2535		2536		2537		2538		2539		2540		2541		2542		2543		2544		2545		2546		2547		2548		2549		2550		2551		2552		2553		2554		2555		2556		2557		2558		2559		2560		2561		2562		2563		2564		2565		2566		2567		2568		2569		2570		2571		2572		2573		2574		2575		2576		2577		2578		2579		2580		2581		2582		2583		2584		2585		2586		2587		2588		2589		2590		2591		2592		2593		2594		2595		2596		2597		2598		2599		2600		2601		2602		2603		2604		2605		2606		2607		2608		2609		2610		2611		2612		2613		2614		2615		2616		2617		2618		2619		2620		2621		2622		2623		2624		2625		2626		2627		2628		2629		2630		2631		2632		2633		2634		2635		2636		2637		2638		2639		2640		2641		2642		2643		2644		2645		2646		2647		2648		2649		2650		2651		2652		2653		2654		2655		2656		2657		2658		2659		2660		2661		2662		2663		2664		2665		2666		2667		2668		2669		2670		2671		2672		2673		2674		2675		2676		2677		2678		2679		2680		2681		2682		2683		2684		2685		2686		2687		2688		2689		2690		2691		2692		2693		2694		2695		2696		2697		2698		2699		2700		2701		2702		2703		2704		2705		2706		2707		2708		2709		2710		2711		2712		2713		2714		2715		2716		2717		2718		2719		2720		2721		2722		2723		2724		2725		2726		2727		2728		2729		2730		2731		2732		2733		2734		2735		2736		2737		2738		2739		2740		2741		2742		27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## SECTION C

### DEATHS

The number of Massachusetts resident deaths decreased from 2005 (53,776 deaths) to 2006 (53,293 deaths). Using the Department of Public Health population estimates, the 2006 crude death rate of 827.9 per 100,000 population was lower than the 2005 crude death rate of 840.4. As with live births, Massachusetts resident deaths include all deaths to Massachusetts residents regardless of the state in which the deaths occurred. Most data presented in this section are resident data. Occurrence deaths are used only to analyze cases referred to the medical examiner.

#### DEATHS BY RACE/ETHNICITY

From 2005 to 2006, the number of deaths by race/ethnicity remained relatively constant with White non-Hispanic residents comprising 92.2% of the total deaths in Massachusetts. Black non-Hispanic deaths totaled 4.2% of the total deaths, Hispanic deaths 2.2%, Asian non-Hispanic deaths 1.2%, and other and unknown race deaths 0.2%.

Prior to 1989, only a race question was included on death certificates. A separate item on Hispanic origin was added to the death record beginning January 1, 1989. This item asks whether the decedent was of Hispanic origin. If answered affirmatively, then specific Hispanic origin (e.g., Puerto Rican, Dominican, Cuban, etc.) is requested.

#### DEATHS BY CAUSE

In 1999, the International Classification of Disease, Tenth Revision (ICD-10) replaced the Ninth revision of this coding system. The World Health Organization developed the International Classification of Disease and the United States adopted it in accordance with an international agreement, to promote international comparability in collecting, classifying, and tabulating mortality statistics.

Cause of death statistics in this report are based on the Tenth Revision of the International Classification of Diseases (ICD-10). The methodology of coding cause of death from death certificates is consistent nationally, using the Automated Classification of Medical Entities (ACME) developed by the National Center for Health Statistics (NCHS). The ACME system requires every disease or condition mentioned on the record to be coded. The underlying cause is then selected by a computer program which incorporates the ICD-10 rules and conventions. Cause of death information in this report is based on underlying cause, except where otherwise noted.

The leading causes of death differed somewhat by race and ethnicity in 2006, as in previous years. Nine of the ten leading causes of death for White non-Hispanics were chronic conditions (e.g., heart disease, cancer, stroke, respiratory illness, and diabetes) which usually afflict older people. The leading causes of death for Black non-Hispanics included homicide which occurs more frequently among younger

Table C-1. Leading Causes of Death by Race and Hispanic Ethnicity, Massachusetts: 2006

White non-Hispanic			Black non-Hispanic			Hispanic			Asian non-Hispanic			Total		
Cause	#	%	Cause	#	%	Cause	#	%	Cause	#	%	Cause	#	%
Cancer	12,384	25.2	Cancer	555	24.9	Cancer	218	18.3	Cancer	201	31.7	Cancer	13,375	25.1
Heart disease	12,158	24.7	Heart disease	403	18.0	Heart disease	196	16.4	Heart disease	113	17.8	Heart disease	12,891	24.2
Stroke	2,623	5.3	Stroke	125	5.6	Unintentional Injuries <sup>1</sup>	129	10.8	Stroke	57	9.0	Stroke	2,868	5.4
Chronic Lower Respiratory Disease	2,434	5.0	Unintentional Injuries <sup>1</sup>	123	5.5	Stroke	58	4.9	Unintentional Injuries <sup>1</sup>	28	4.4	Chronic Lower Respiratory Disease	2,529	4.7
Unintentional Injuries <sup>1</sup>	1,889	3.8	Diabetes	91	4.1	Diabetes	51	4.3	Chronic Lower Respiratory Disease	18	2.8	Unintentional Injuries <sup>1</sup>	2,170	4.1
Pneumonia & Influenza	1,662	3.4	Nephritis	90	4.0	AIDS/HIV-related diseases	37	3.1	Nephritis	17	2.7	Pneumonia & Influenza	1,748	3.3
Alzheimer's Disease	1,488	3.0	Homicide	81	3.6	Nephritis	35	2.9	Pneumonia & Influenza	15	2.4	Alzheimer's Disease	1,556	2.9
Nephritis	1,246	2.5	Chronic Lower Respiratory Disease	54	2.4	Perinatal Conditions	34	2.8	Suicide	14	2.2	Nephritis	1,390	2.6
Diabetes	969	2.0	Septicemia	52	2.3	Ill Defined Conditions	31	2.6	Diabetes	13	2.0	Diabetes	1,127	2.1
Septicemia	803	1.6	Perinatal Conditions	51	2.3	Homicide	30	2.5	Alzheimer's Disease	12	1.9	Septicemia	893	1.7
All other causes	11,476	23.4	All other causes	608	27.2	All other causes	375	31.4	All other causes	147	23.1	All other causes	12,746	23.9
Total <sup>2</sup>	49,132	100	Total <sup>2</sup>	2,233	100	Total <sup>2</sup>	1,194	100	Total <sup>2</sup>	635	100	Total <sup>2</sup>	53,293	100

<sup>1</sup> Unintentional Injuries such as vehicular accidents, falls, fires, and drowning that were not intended to occur.

<sup>2</sup> Percents may not sum to 100 due to rounding.

people. For Asian non-Hispanics, suicide was among the top ten leading causes of death. For Hispanics, AIDS/HIV-related diseases, perinatal conditions, and homicide were among the leading causes of death in 2006.

#### ACQUIRED IMMUNE DEFICIENCY SYNDROME (AIDS)

In 2006, 179 Massachusetts residents died from AIDS and HIV-related illnesses. This represents a 0.6% decrease from 2005 and the overall age adjusted rate of death was 2.7 in 2006 and 2005. This continues what has been a generally downward trend and represents the lowest annual HIV/AIDS deaths since the epidemic's peak in 1994 at 981 deaths.

#### DEATHS BY AGE

Persons 75 years of age or older accounted for 64.1% of all resident deaths. The percent of deaths to residents in this age group varied widely by sex and race/ethnicity.

Table C-2. Deaths to Those 75 and Older versus Younger than 75 by Race and Hispanic Ethnicity, Massachusetts Residents: 2006

SEX	RACE	% OF DEATHS UNDER AGE 75	% OF DEATHS 75 YEARS AND OLDER
MALE	WHITE NON-HISPANIC	43.3	56.7
	BLACK NON-HISPANIC	68.8	31.2
	HISPANIC	81.9	18.1
	ASIAN	61.7	38.3
	OTHER/UNKNOWN	84.1	15.9
	TOTAL	45.9	54.1
FEMALE	WHITE NON-HISPANIC	25.4	74.6
	BLACK NON-HISPANIC	51.8	48.2
	HISPANIC	65.4	34.6
	ASIAN	39.5	60.5
	OTHER/UNKNOWN	45.5	54.5
	TOTAL	27.3	72.7
TOTAL	WHITE NON-HISPANIC	33.6	66.4
	BLACK NON-HISPANIC	60.5	39.5
	HISPANIC	75.0	25.0
	ASIAN	50.6	49.4
	OTHER/UNKNOWN	62.6	37.4
	TOTAL	35.9	64.1

## DEATHS BY PLACE OF OCCURRENCE

Between 2003 and 2006, there was little variation in the sites where deaths occurred. The data are presented below:

Table C-3. Distribution of Deaths by Place of Occurrence, Massachusetts: 2003-2006

Type of Place where Death Occurred	2003		2004		2005		2006	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Hospital (inpatient/outpatient)	24,936	44%	23,558	43%	23,129	43%	22,512	42%
Dead on Arrival	905	2%	936	2%	871	2%	692	1%
Nursing Home	16,888	30%	16,511	30%	16,446	31%	16,205	30%
At Home	12,439	22%	12,287	23%	12,004	22%	12,372	23%
Other	968	2%	1,104	2%	1,311	2%	1,491	3%
Unknown	58	0.10%	23	0.04%	15	0.03%	21	0.04%

## DEATHS CERTIFIED BY MEDICAL EXAMINERS

The total number of deaths occurring in Massachusetts that were certified by medical examiners increased from 4,112 in 2005 to 5,090 in 2006. Of the deaths certified by medical examiners, 48.7% were reported as a result of natural causes. The percentage of deaths due to natural causes (i.e., non-injury related causes) certified by medical examiners varies somewhat by county, from a high of 58.3% in Dukes County to a low of 43.1% in Hampden County. Suffolk County had the greatest percentage of deaths (32.9%) that were referred to medical examiners, as well as the highest number of such deaths at 2,551.



## DEFINITIONS IMPORTANT FOR THIS SECTION INCLUDE:

### AGE-ADJUSTED RATE

A procedure for adjusting rates, designed to minimize the effects of differences in age distribution when comparing rates for different populations. This procedure is accomplished by the computational process known as age standardization, whereby mortality statistics are adjusted to a reference population. For this publication, the reference population is the 2000 US population, the same as used by the National Center for Health Statistics. The result of the process is a summary index that can be used to compare rates of different populations throughout the nation and over time.

### COMMUNITY HEALTH NETWORK AREAS (CHNA)

The Department of Public Health, in collaboration with health service providers, coalition members, and other interested citizens, has designated 27 geographic areas for community health planning. It is the Department's intention to foster in each of these areas the development of Community Health Networks: a consortia of health care providers, human service agencies, schools, churches, youth, parents, elders, advocacy groups, and individual consumers to address the health needs of the community. These community coalitions will participate in monitoring outcomes and the progress of strategies and responses to those health needs. The data published in this edition reflect the new definitions of CHNAs instituted in January 1997.

A Community Health Network Area (CHNA) is defined as an aggregation of cities and towns. The city of Boston constitutes its own Community Health Network Area. It is hoped that the Networks will mobilize around key health issues impacting the community, promote prevention efforts, enhance access to health care, provide opportunities for more collaboration among agencies, and create a client-centered, outcome-oriented health service delivery system. Community Health Networks will also promote efficiency in service delivery by working to reduce duplication and overlap, and by identifying gaps in service.

### DEATH CERTIFICATE

A vital record signed by a licensed physician that includes cause of death, decedent's name, sex, birth date, place of residence, and place of occurrence.

### INTERNATIONAL CLASSIFICATION OF DISEASES, NINTH REVISION

The International Classification of Disease (ICD) classifies cause of death information for statistical purposes. The ICD was first used in 1900 and has since been revised about every 10 years. The Ninth Revision, published in 1977, is used to code mortality data beginning with 1979. The International Classification of Diseases, Tenth Revision (ICD-10) replaced the International Classification of Diseases, Ninth Revision (ICD-9) for coding all mortality data in 1999.

## MASSCHIP

MassCHIP is a free on-line interactive public health and sociodemographic data dissemination service developed by the Department of Public Health. It contains 36 major data sets which users may query by downloading the application onto their computer and accessing MassCHIP data servers through the Internet. MassCHIP returns counts of events and a wide variety of statistical measures, including percentages, age-specific and age-adjusted rates, and standardized incidence ratios. The system provides charting and mapping options and results may be exported to EXCEL. The system also offers 48 fixed-format topic-specific reports as web pages, for which users can choose geographic areas of interest.

## MISER

The Massachusetts Institute for Social and Economic Research. This research institute, located at the University of Massachusetts in Amherst, produced the official population estimates and projections for the Department of Public Health through 1998.

## OCCURRENCE DEATH

Occurrence deaths include all deaths that occur within the state, including deaths of non-residents. An interstate exchange agreement among the 50 states and Canada provides for exchanges of copies of birth and death records. These records are used for statistical purposes only, and allow each state or province to track the births and deaths of residents.

## RACE

For death records, race is provided by the death record informant (e.g., spouse or next of kin).

## RESIDENT DEATH

The death of a person whose usual place of residence or permanent address (as reported by the informant) is in one of the 351 cities or towns of Massachusetts, regardless of where the death took place. Unless otherwise noted, all data in this publication are resident data. An interstate exchange agreement among the 50 states, Canada, Puerto Rico, Guam, the Virgin Islands, and the District of Columbia provides for exchange of copies of birth and death records. These records are used for statistical purposes only, and allow each state or province to track the births and deaths of residents.

## UNDERLYING CAUSE OF DEATH

The underlying cause of death is: 1.) the disease or injury that initiated the series of events leading to death, or 2.) the circumstances of the unintentional or intentional injury that resulted in the death. See the appendix for the Death Certificate.

## RATES IMPORTANT FOR THIS SECTION INCLUDE:

AGE-SPECIFIC DEATH RATE	$\frac{\text{Number of Resident Deaths in Specific Age Group}}{\text{Total Population of Specific Age Group}} \times 100,000$
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CAUSE-SPECIFIC DEATH RATE	$\frac{\text{Number of Resident Deaths for a Specific Cause}}{\text{Total Population}} \times 100,000$
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CRUDE DEATH RATE	$\frac{\text{Number of Resident Deaths in a Year}}{\text{Total Population}} \times 100,000$
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## ICD-10 Poisoning Codes Used in this Publication

<u>Manner of Death</u>	<u>ICD-10 Code</u>
All Poisoning Deaths	X40-X49, X60-X69, X85-X90, Y10-Y19, Y35.2
Narcotics and psychodysleptics	X42, X62, Y12
Other and unspecified drugs, medicaments, biological substances	X44, X64, X89, Y14
Antiepileptic, sedative-hypnotic, antiparkinsonism & psychotropic	X41, X61, Y11
Gases and vapours	X47, X67, X86, X88, Y17, Y35.2
Nonopioid analgesics, antipyretics & antirheumatics	X40, X60, Y10
Alcohol	X45, X65, Y15
Organic solvents and halogenated hydrocarbons	X46, X66, Y16
Other drugs acting on autonomic nervous system	X43, X63, Y13
Other and unspecified chemicals and noxious substances	Remaining causes



**ICD-10 and ICD-9 Codes Used in this Publication**  
(Sorted by ICD-10 Codes)

<b>Cause of Death</b>	<b>ICD-10 Code</b>	<b>ICD-9 Code</b>
<b>Infectious and parasitic diseases</b>	A00-B99	001-139
Septicemia	A40-A41	038
Human Immunodeficiency Virus (HIV) disease	B20-B24	042-044
<b>Cancer (Malignant Neoplasms)</b>	C00-C97	140-208
of esophagus	C15	150
of stomach	C16	151
of colon, rectum, rectum and anus	C18-C21	153-154, 159.9
of pancreas	C25	157
of trachea, bronchus and lung	C33-C34	162
of female breast	C50	174
of cervix uteri	C53	180
of corpus uteri and uterus, part unspecified	C54-C55	179,182
of ovary	C56	183.0
of prostate	C61	185
of kidney and renal pelvis	C64-C65	189.0-189.1
of bladder	C67	188
of meninges, brain & other parts of central nervous system	C70-C72	191-192
Hodgkin's Disease	C81	201
Non-Hodgkin's Lymphoma	C82-C85	200, 202 (except 202.4)
Leukemia	C91-C95	202.4, 204-208
Multiple myeloma and immunoproliferative neoplasms	C88, C90	203
<b>Diabetes Mellitus</b>	E10-E14	250
<b>Alzheimer's disease</b>	G30	331.0
<b>Heart Disease</b>	I00-I09, I11, I13, I20-I51	390-398, 402, 404-429
Stroke (Cerebrovascular disease)	I60-I69	430-438
Influenza and pneumonia	J10-J18	480-487
Chronic lower respiratory diseases <sup>1</sup>	J40-J47	490-496
Chronic liver disease and cirrhosis	K70, K73-K74	571
Nephritis	N00-N07, N17-N19, N25-N27	580-589
Congenital malformations, deformations, and chromosomal abnormalities	Q00-Q99	740-759
Certain conditions originating in the perinatal period (Perinatal Conditions)	P00-P96	760-779
Signs and symptoms	R00-R99	780-797, 798.1-798.9, 799
Sudden infant death syndrome (SIDS)	R95	798.0
External causes of injuries and poisonings (intentional, unintentional and of undetermined intent)	V01-Y89	E800-E999
<b>Accidents (Unintentional Injuries)</b>	V01-X59, Y85-Y86	E800-E949
Motor Vehicle-related injuries	V02-V04, V09.0, V09.2, V12-V14, V19.0-V19.2, V19.4-V19.6, V20-V79, V80.3-V80.5, V81.0-V81.1, V82.0-V82.1, V83-V86, V87.0-V87.8, V88.0-V88.8, V89.0, V89.2	E810-E825
Unintentional non-transport injuries	W00-X59, Y86	E850-E869, E880-E928, E929.2-E929.9
<b>Suicide</b>	X60-X84, Y87.0	E950-E959
<b>Homicide</b>	X85-Y09, Y87.1	E960-E969
<b>Injuries of undetermined intent</b>	Y10-Y34, Y87.2, Y89.9	E980-E989

1. The title of this cause of death has changed between ICD-10 and ICD-9. Chronic Lower Respiratory Disease (ICD-10 title) corresponds to Chronic Obstructive Pulmonary Disease (COPD) (ICD-9 title).



**ICD-10 and ICD-9 Codes Used in this Publication**  
(Sorted by Cause of Death)

<b><u>Cause of Death</u></b>	<b><u>ICD-10 Code</u></b>	<b><u>ICD-9 Code</u></b>
Alzheimer's Disease	G30	331.0
<b>Cancer (Malignant Neoplasms)</b>	C00-C97	140-208
of bladder	C67	188
of cervix uteri	C53	180
of colon, rectum, rectum and anus	C18-C21	153-154, 159.9
of corpus uteri and uterus, part unspecified	C54-C55	179,182
of esophagus	C15	150
of female breast	C50	174
Hodgkin's Disease	C81	201
of kidney and renal pelvis	C64-C65	189.0-189.1
Leukemia	C91-C95	202.4, 204-208
of meninges, brain & other parts of central nervous system	C70-C72	191-192
Multiple myeloma and immunoproliferative neoplasms	C88, C90	203
Non-Hodgkin's lymphoma	C82-C85	200, 202 (except 202.4)
of ovary	C56	183.0
of prostate	C61	185
of stomach	C16	151
of pancreas	C25	157
of trachea, bronchus and lung	C33-C34	162
Certain conditions originating in the perinatal period (Perinatal Conditions)	P00-P96	760-779
Chronic liver disease and cirrhosis	K70, K73-K74	571
Chronic lower respiratory diseases <sup>1</sup>	J40-J47	490-496
Congenital malformations, deformations, and chromosomal abnormalities	Q00-Q99	740-759
Diabetes Mellitus	E10-E14	250
<b>External causes of injuries and poisonings (intentional, unintentional and of undetermined intent)</b>	V01-Y98	E800-E999
Homicide	X85-Y09, Y87.1	E960-E969
Injuries of undetermined intent	Y10-Y34, Y87.2, Y89.9	E980-E989
Suicide	X60-X84, Y87.0	E950-E959
<b>Accidents (Unintentional Injuries)</b>	V01-X59	E800-E949
Motor Vehicle-related injuries	V02-V04, V09.0, V09.2, V12-V14, V19.0-V19.2, V19.4-V19.6, V20-V79, V80.3-V80.5, V81.0-V81.1, V82.0-V82.1, V83-V86, V87.0-V87.8, V88.0-V88.8, V89.0, V89.2	E810-E825
Unintentional non-transport injuries	W00-X59, Y86	E850-E869, E880-E928, E929.2-E929.9
Heart Disease	I00-I09, I11, I13, I20-I51	390-398, 402, 404-429
<b>Infectious and parasitic diseases</b>	A00-B99	001-139
Human Immunodeficiency Virus (HIV) disease (AIDS)	B20-B24	042-044
Septicemia	A40-A41	038
Influenza and pneumonia	J10-J18	480-487
Nephritis	N00-N07, N17-N19, N25-N27	580-589
Stroke (Cerebrovascular disease)	I60-I69	430-438
Signs and symptoms	R00-R99	780-797, 798.1-798.9, 799
Sudden infant death syndrome (SIDS)	R95	798.0

1. The title of this cause of death has changed between ICD-10 and ICD-9. Chronic Lower Respiratory Disease (ICD-10 title) corresponds to Chronic Obstructive Pulmonary Disease (COPD) (ICD-9 title).

### ICD-10 Injury Codes Used in this Publication

<u>Cause of Death</u>	<u>ICD-10 Code</u>
<b>Suicide</b>	X60-X84, Y87.0
Poisoning	X60-X69
Hanging, strangulation or suffocation	X70
Firearm	X72-X74
Other and unspecified	Residual
<b>Homicide</b>	X85-Y09, Y87.1
Firearm	Y93-Y95
Cut or pierce	X99
Other and unspecified	Residual
<b>Unintentional Injuries (Accidents)</b>	V01-X59, Y85-Y86
Falls	W00-W19
Hanging, strangulation or suffocation	W75-W84
Drowning or submersion	W65-W74
Smoke, fire and flames	X00-X19
Poisoning	X40-X49
Firearm	W32-W34
<b>Motor Vehicle-related</b>	V02-V04, V09.0, V09.2, V12-V14, V19.0-V19.2, V19.4-V19.6, V20-V79, V80.3-V80.5, V81.0-V81.1, V82.0-V82.1, V83-V86, V87.0-V87.8, V88.0-V88.8, V89.0, V89.2
Injury to pedestrian	V02-V04, V09.0
Injury to pedal cyclist	V12-V14, V19.0, V19.2, V19.4, V19.5, V19.6
Injury to motorcyclist	V20-V29
Injury to occupant	V30-V79, V80.3, V80.4, V80.5, V81.0, V81.1, V82.0, V82.1, V83-V86
Other and unspecified	Residual
Other and unspecified	Residual
<b>Events of Undetermined Intent</b>	Y10-Y34, Y87.2, Y89.9
Poisoning	Y10-Y19
Drowning or submersion	Y21
Other and unspecified	Residual
<b>Legal Intervention</b>	Y35.-Y36, Y89.0, Y89.1
Firearm	Y35.0
<b>Adverse Effects</b>	Y40-Y59, Y60-Y84, Y88
Drugs	Y40-Y59, Y88.0
Medical Care	Y60-Y84, Y88.1, Y88.2, Y88.3

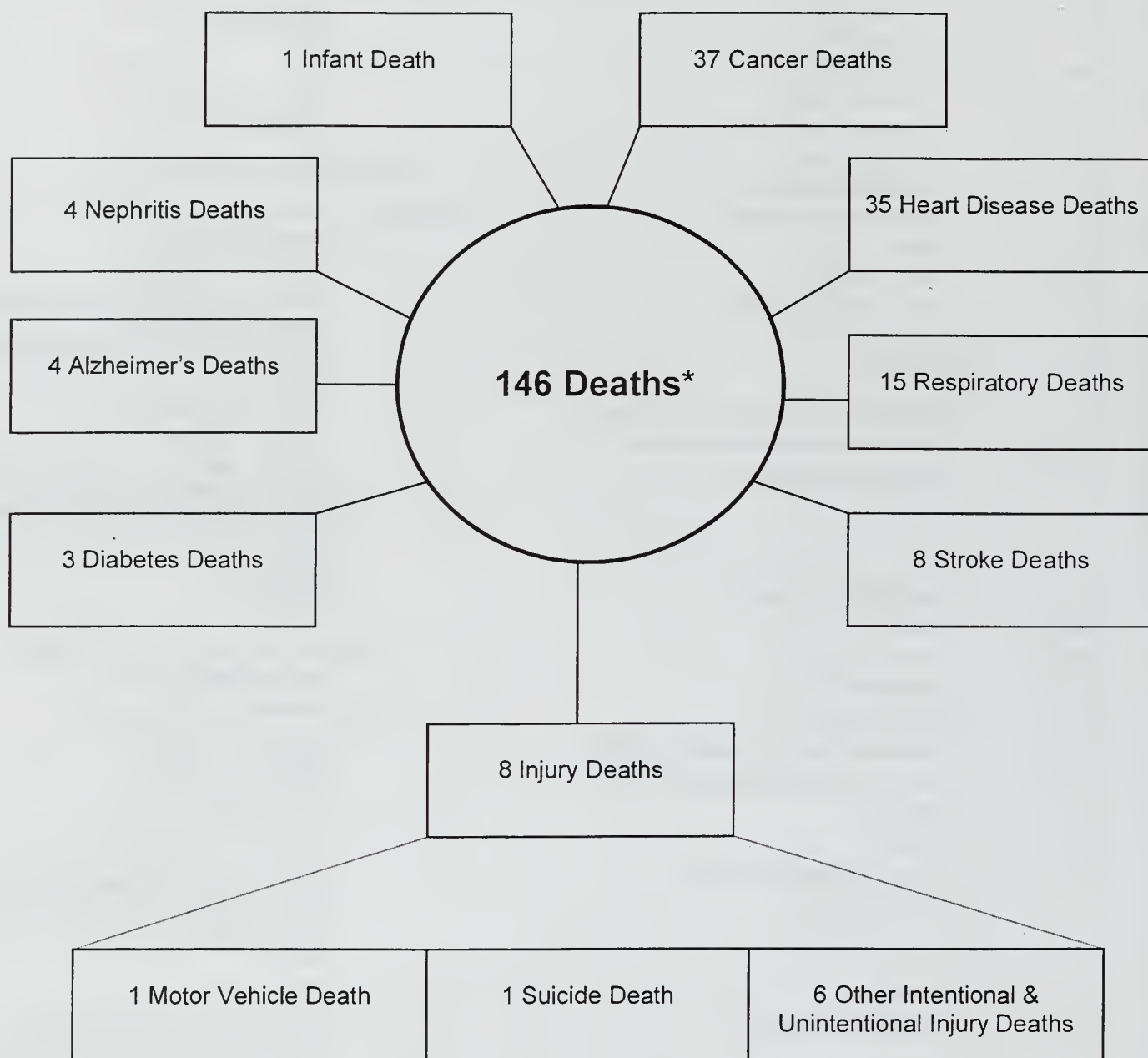
**ICD-10 Codes for Selected Healthy People 2010 Mortality Objectives Used in this  
Publication**  
(Sorted by Objective Number)

Objective Number	Cause of Death*	ICD-10 Identifying Codes
3-1	Cancer (all sites)	C00-C97
3-2	Lung cancer	C33-C34
3-3	Female breast cancer	C50
3-4	Uterine cervix cancer	C53
3-5	Colorectal cancer	C18-C21
3-6	Oropharyngeal cancer	C00-C14
3-7	Prostate cancer	C61
3-8	Malignant melanoma	C43
12-1	Coronary heart disease	I11, I20-I25
12-7	Stroke	I60-I69
13-14	HIV infection	B20-B24
15-3	Firearm-related deaths	W32-W34, X72-X74, X93-X95, Y22-Y24, Y35.0, Y93-Y95
15-8	Poisoning	X40-X49, X60-X69, X85-X90, Y10-Y19, Y35.2
15-9	Hanging, strangulation or suffocation	W75-W84, X70, X91, Y20
15-13	Unintentional injuries (Accidents)	V01-X59, Y85-Y86
15-15	Motor vehicle-related	V02-V04, V09.0, V09.2, V12-V14, V19.0-V19.2, V19.4-V19.6, V20-V79, V80.3-V80.5, V81.0-V81.1, V82.0-V82.1, V83-V86, V87.0-V87.8, V88.0-V88.8, V89.0, V89.2
15-25	Residential fire deaths	X00, X02
15-27	Falls	W00-W19
15-29	Drownings	W65-W74, X71, X92, Y21, V90, V92
15-32	Homicides	X85-Y09, Y87.1
16-1f	Birth defects	Q00-Q99
16-1g	Congenital heart and vascular defects	Q20-Q24
16-1h	Sudden infant death syndrome (SIDS)	R95
18-1	Suicide	X60-X84, Y87.0
24-1	Asthma	J45-J46
26-1	Motor-vehicle crash deaths	V02-V04, V09.0, V09.2, V12-V14, V19.0-V19.2, V19.4-V19.6, V20-V79, V80.3-V80.5, V81.0-V81.1, V82.0-V82.1, V83-V86, V87.0-V87.8, V88.0-V88.8, V89.0, V89.2
26-2	Cirrhosis	K74
26-3	Drug induced deaths	F11.0-F11.5, F11.7-F11.9, F12.0-F12.5, F12.7-F12.9, F13.0-F13.5, F13.7-F13.9, F14.0-F14.5, F14.7-F14.9, F15.0-F15.5, F15.7-F15.9, F16.0-F16.5, F16.7-F16.9, F17.0, F17.3-F17.5, F17.7-F17.9, F18.0-F18.5, F18.7-F18.9, F19.0-F19.5, F19.7-F19.9, X40-X44, X60-64, X85, Y10-Y14

\*These Healthy People 2010 objectives use underlying cause of death data.

**Figure C-1. Daily Mortality Statistics, Massachusetts: 2006**

Every day in 2006, in Massachusetts there were on average:



\*includes 31 deaths due to other causes

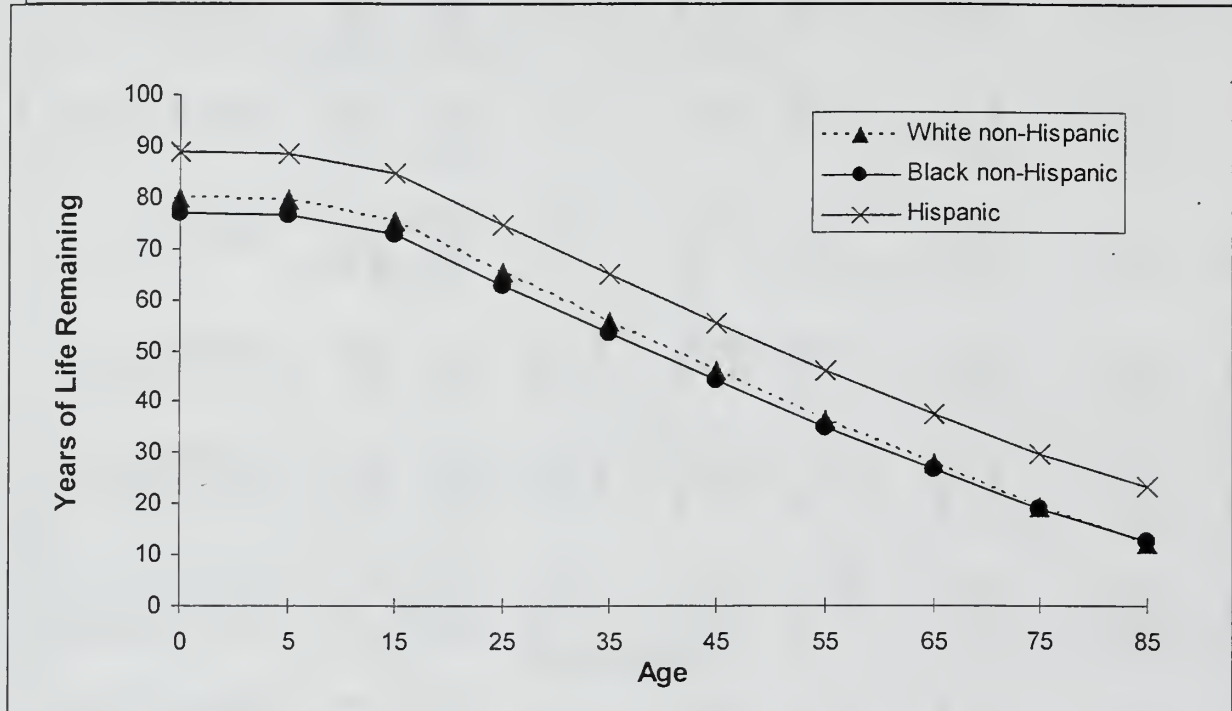


Table C-4. Trends in Mortality Characteristics, Massachusetts: 1996 - 2006

Year	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Resident deaths <sup>1</sup>	Number	55,187	54,634	55,204	55,763	56,591	56,733	56,881	56,194	54,419	53,293
	Crude rate <sup>2,3,4</sup>	892.4	877.3	877.5	881.9	889.5	887.1	887.0	875.2	848.1	827.9
	Age-adjusted rate <sup>5</sup>	853.0	834.8	808.8	808.8	812.2	803.4	793.8	772.6	739.3	717.6
Race/ethnicity of decedent <sup>6,7</sup>	Number	51,917	51,398	51,829	52,282	52,959	52,792	52,839	52,050	50,439	49,132
	Percent <sup>8</sup>	94.1	94.1	93.9	93.8	93.6	93.1	92.9	92.6	92.7	92.2
	Age-adjusted rate	852.2	835.1	808.5	808.7	814.5	804.4	796.0	775.2	744.7	723.3
White non-Hispanic	Number	2,025	2,033	1,969	2,018	2,109	2,226	2,275	2,378	2,225	2,233
	Percent	3.7	3.7	3.6	3.6	3.7	3.9	4.0	4.2	4.1	4.2
	Age-adjusted rate	1,141.1	1,142.1	1,076.6	995.2	933.5	951.0	935.6	949.1	866.2	838.4
Black non-Hispanic	Number	398	403	413	449	467	510	531	579	531	635
	Percent	0.7	0.7	0.7	0.8	0.8	0.9	0.9	1.0	1.0	1.2
	Age-adjusted rate	534.5	512.0	500.7	422.4	401.4	396.9	397.6	411.9	353.7	379.0
Asian non-Hispanic	Number	803	749	924	975	1,014	1,059	1,166	1,121	1,115	1,194
	Percent	1.5	1.4	1.7	1.7	1.8	1.9	2.0	2.0	2.1	2.2
	Age-adjusted rate	430.0	391.0	463.8	507.8	585.2	556.5	591.0	520.6	482.1	479.9
Hispanic	Number	29,152	29,261	29,568	29,786	30,465	30,780	30,427	30,053	29,067	28,508
	Percent	702.7	699.0	678.0	676.9	688.8	689.5	674.4	659.3	632.3	612.7
	Age-adjusted rate	26,035	25,373	25,635	25,977	26,126	25,953	26,454	26,141	25,352	24,785
Gender of decedent <sup>7</sup>	Number	1,074.0	1,035.0	1,000.8	1,001.6	988.7	957.6	955.1	923.3	878.0	858.9
	Percent										
	Age-adjusted rate										
Female	Number	403	425	414	418	377	407	397	383	376	369
	Percent	197	174	128	165	181	169	167	149	137	124
	Age-adjusted rate	434	422	413	407	403	444	460	490	517	471
Male	Number	2,720	2,348	2,373	2,397	2,375	2,571	2,490	2,484	2,247	2,173
	Percent	7,477	7,416	7,501	7,431	7,841	8,004	8,344	8,476	8,347	8,355
	Age-adjusted rate	10,711	10,286	10,216	9,782	9,746	9,323	8,922	8,611	8,126	7,905
Age of decedent <sup>7</sup>	Number	16,839	16,884	16,946	17,397	17,554	17,416	17,262	16,973	16,342	15,333
	Percent										
	Age-adjusted rate										
<1 year	Number	16,400	16,677	17,213	17,765	18,113	18,395	18,838	18,627	18,327	18,111
	Percent										
	Age-adjusted rate										
1-14 years	Number	403	425	414	418	377	407	397	383	376	369
	Percent	197	174	128	165	181	169	167	149	137	124
	Age-adjusted rate	434	422	413	407	403	444	460	490	517	471
15-24 years	Number	2,720	2,348	2,373	2,397	2,375	2,571	2,490	2,484	2,247	2,173
	Percent	7,477	7,416	7,501	7,431	7,841	8,004	8,344	8,476	8,347	8,355
	Age-adjusted rate	10,711	10,286	10,216	9,782	9,746	9,323	8,922	8,611	8,126	7,905
25-44 years	Number	16,839	16,884	16,946	17,397	17,554	17,416	17,262	16,973	16,342	15,333
	Percent										
	Age-adjusted rate										
45-64 years	Number	16,400	16,677	17,213	17,765	18,113	18,395	18,838	18,627	18,327	18,111
	Percent										
	Age-adjusted rate										
65-74 years	Number	403	425	414	418	377	407	397	383	376	369
	Percent	197	174	128	165	181	169	167	149	137	124
	Age-adjusted rate	434	422	413	407	403	444	460	490	517	471
75-84 years	Number	2,720	2,348	2,373	2,397	2,375	2,571	2,490	2,484	2,247	2,173
	Percent	7,477	7,416	7,501	7,431	7,841	8,004	8,344	8,476	8,347	8,355
	Age-adjusted rate	10,711	10,286	10,216	9,782	9,746	9,323	8,922	8,611	8,126	7,905
85+ years	Number	16,839	16,884	16,946	17,397	17,554	17,416	17,262	16,973	16,342	15,333
	Percent										
	Age-adjusted rate										

1. Deaths presented in all tables and figures are resident deaths. 2. Deaths per 100,000 residents. 3. See Section Definitions for further definition of terms and rates. 4. Rate calculations are based on resident population estimates from MISER for 1994-1995 (released in September 1999), 1996-1997 (released in November 1999), and 1998 (released in September 2000). Resident death data for 2000-2006 are calculated using the Massachusetts (Department of Public Health) Modified Age, Race/Ethnicity, & Sex Estimates 2000-2005 (MMARS00-05), released October 2006. 5. Rates are age-adjusted per 100,000 residents using the 2000 US standard population. 6. Race and ethnicity data in this table are presented as mutually exclusive categories. Persons of Hispanic ethnicity are not included in a race category. Column sum may not equal total because the race, gender or age of some decedents was unknown. 8. Percent of all resident deaths in that year.

**Figure C-2. Expected Years of Life Remaining at Different Ages by Race and Hispanic Ethnicity, Massachusetts: 2006**



**Table C-5. Years of Life Remaining<sup>1</sup> by Race and Hispanic Ethnicity and Gender, Massachusetts: 2006**

At Age:	All	Females	White non-Hispanic Females	Black non-Hispanic Females	Hispanic Females <sup>2</sup>	Males	White non-Hispanic Males	Black non-Hispanic Males	Hispanic Males <sup>2</sup>
Birth	80.0	82.3	82.2	80.0	90.7	77.6	77.7	73.6	83.5
1 year old	79.4	81.7	81.5	79.8	90.2	76.9	77.0	73.3	83.1
5 years old	75.5	77.7	77.6	75.8	86.4	73.0	73.0	69.2	79.2
15 years old	65.5	67.7	67.6	65.9	76.4	63.1	63.1	59.4	69.3
25 years old	55.8	57.9	57.8	56.1	66.6	53.5	53.4	50.4	59.8
35 years old	46.2	48.1	48.0	46.5	56.7	44.0	43.9	41.3	50.4
45 years old	36.8	38.5	38.4	37.1	47.3	34.7	34.6	32.3	41.4
55 years old	27.8	29.4	29.2	28.6	38.2	26.0	25.9	24.2	33.3
65 years old	19.6	20.8	20.6	20.5	29.7	18.0	17.9	17.0	26.0
75 years old	12.5	13.3	13.1	13.6	22.9	11.3	11.1	10.7	20.4
85 years old	7.3	7.6	7.5	8.0	18.0	6.6	6.4	7.1	16.5

1. Years of Life Remaining calculated using the Greville Abridged Life Table Method (source: Dublin LI. Length of Life - A Study of the Life Table. Ronald Press Co. New York. 1949). Population data from the Massachusetts (Department of Public Health) Modified Age, Race/Ethnicity, & Sex Estimates 2005 (MMARS05), released October 2006. 2. There are well-known difficulties in calculating accurate mortality rates for Massachusetts smaller populations such as Asians, Native Americans and Hispanics.

Table C-6. Five Leading Causes of Death<sup>1</sup>, Comparability Unmodified and Comparability Modified Age-Adjusted Rates, Massachusetts and United States: 1996-2006

Year <sup>2</sup>	Heart Disease						Cancer			Stroke		
	MA		US		MA		MA		US		MA	
	Comparability Unmodified <sup>3</sup>	Comparability Modified <sup>4</sup>	Comparability Unmodified <sup>3</sup>	Comparability Modified <sup>4</sup>	Comparability Unmodified <sup>3</sup>	Comparability Modified <sup>4</sup>	Comparability Unmodified <sup>3</sup>	Comparability Modified <sup>4</sup>	Comparability Unmodified <sup>3</sup>	Comparability Modified <sup>4</sup>	Comparability Unmodified <sup>3</sup>	Comparability Modified <sup>4</sup>
1996	Rate	257.1	253.4	293.4	289.2	221.2	222.7	206.7	208.1	50.5	53.4	63.2
	% of Total	30.4	32.2	32.2	289.2	25.2	25.2	23.1	23.1	6.1	6.9	6.9
1997	Rate	249.0	245.5	285.7	281.6	215.4	216.8	203.7	205.1	50.6	53.5	61.8
	% of Total	30.2	32.0	32.0	281.6	25.0	25.0	23.1	23.1	6.2	6.9	6.9
1998	Rate	231.0	227.7	272.4	273.9	209.0	210.4	202.4	204.4	47.1	49.7	59.5
	% of Total	29.0	31.6	31.6	273.9	25.0	25.0	23.0	23.0	6.0	6.8	6.8
1999	Rate	222.1	222.1	265.9	265.9	206.6	206.6	201.6	201.6	50.2	50.2	61.4
	% of Total	27.9	27.9	30.3	30.3	24.8	24.8	23.0	23.0	6.4	6.4	7.0
2000	Rate	216.7	216.7	258.2	258.2	206.1	206.1	200.9	200.9	50.9	50.9	60.9
	% of Total	27.1	27.1	29.5	29.5	24.8	24.8	23.0	23.0	6.4	6.4	6.9
2001	Rate	211.0	211.0	247.7	247.7	200.0	200.0	195.8	195.8	46.7	46.7	57.9
	% of Total	26.7	26.7	28.9	28.9	24.2	24.2	22.9	22.9	6.2	6.2	6.8
2002	Rate	201.1	201.1	240.4	240.4	200.1	200.1	194.0	194.0	48.1	48.1	56.3
	% of Total	26.0	26.0	28.4	28.4	24.0	24.0	22.8	22.8	6.0	6.0	6.7
2003	Rate	196.6	196.6	232.3	232.3	193.0	193.0	190.1	190.1	45.0	45.0	53.5
	% of Total	26.0	26.0	28.0	28.0	24.1	24.1	22.7	22.7	6.0	6.0	6.5
2004	Rate	182.8	182.8	217.0	217.0	188.4	188.4	185.8	185.8	42.5	42.5	50.0
	% of Total	25.3	25.3	27.2	27.2	24.5	24.5	23.1	23.1	6.0	6.0	6.3
2005	Rate	172.2	172.2	211.0 <sup>6</sup>	211.0 <sup>6</sup>	184.9	184.9	183.8 <sup>6</sup>	183.8 <sup>6</sup>	38.1	38.1	46.6 <sup>6</sup>
	% of Total	24.6	24.6	26.6	26.6	24.5	24.5	22.8	22.8	5.5	5.5	5.9
2006	Rate	168.8 <sup>5</sup>	168.8 <sup>5</sup>	211.0 <sup>6</sup>	211.0 <sup>6</sup>	186.3 <sup>5</sup>	186.3 <sup>5</sup>	183.8 <sup>6</sup>	183.8 <sup>6</sup>	36.7 <sup>5</sup>	36.7 <sup>5</sup>	46.6 <sup>6</sup>
	% of Total	24.2	24.2	26.6	26.6	25.1	25.1	22.8	22.8	5.4	5.4	5.9

**Table C-6 (continued). Five Leading Causes of Death<sup>1</sup>, Comparability Unmodified and Comparability Modified Age-Adjusted Rates, Massachusetts and United States: 1996-2006**

Year <sup>2</sup>	Influenza/Pneumonia				Unintentional Injuries				All Causes	
	MA		US		MA		US		MA	US
	Comparability Unmodified <sup>3</sup>	Comparability Modified <sup>4</sup>	Comparability Unmodified <sup>3</sup>	Comparability Modified <sup>4</sup>	Comparability Unmodified <sup>3</sup>	Comparability Modified <sup>4</sup>	Comparability Unmodified <sup>3</sup>	Comparability Modified <sup>4</sup>		
1996	Rate	41.5	29.0	32.9	19.5	19.5	36.2	35.6	853.0	902.1
	% of Total	5.1		3.6	2.3		4.1			
1997	Rate	39.1	27.3	33.3	19.7	19.7	36.0	35.3	834.8	887.0
	% of Total	4.9		3.7	2.3		4.1			
1998	Rate	40.2	28.1	34.6	19.9	19.8	35.0	36.1	808.8	875.4
	% of Total	5.2		3.9	2.3		4.2			
1999	Rate	30.3		23.4	19.3		35.9		808.8	881.9
	% of Total	3.9		2.7	2.3		4.1			
2000	Rate	29.1		23.7	20.2		35.6		812.2	872.0
	% of Total	3.7		2.8	2.4		3.9			
2001	Rate	24.0		21.8	21.9		34.3		803.5	855.0
	% of Total	3.1		2.6	2.6		4.0			
2002	Rate	27.3		22.7	20.5		35.3		793.8	846.8
	% of Total	4.0		2.7	2.0		4.2			
2003	Rate	26.0		22.0	20.1 <sup>7</sup>		37.3		772.6	832.7
	% of Total	3.6		2.7	2.5		4.3			
2004	Rate	24.9		19.8	19.4		37.7		739.3	800.8
	% of Total	3.6		2.5	2.5		4.7			
2005	Rate	24.2		20.3 <sup>8</sup>	27.4		39.1 <sup>8</sup>		720.6	798.8 <sup>8</sup>
	% of Total	3.6		2.6	3.5		4.8			
2006	Rate	22.0 <sup>7</sup>		20.3 <sup>8</sup>	31.4 <sup>7</sup>		39.1 <sup>8</sup>		717.6	798.8 <sup>8</sup>
	% of Total	3.3		2.6	4.1		4.8			

1. Cause of death: the disease or injury that initiated the events leading to death; or the circumstances of the unintentional or intentional injury that resulted in the death. 2. 1994-1998 data coded according to ICD-9, 1999-2006 data coded according to ICD-10. ICD-9 and ICD-10 codes used in this publication are listed in the Section Definitions. 3. Comparability unmodified rate: this rate has not been modified to account for changes from ICD-9 to ICD-10. 4. Comparability Modified Rate: this rate is adjusted using the preliminary comparability ratio (CR) from NCHS, February 2001 in order to account for changes from ICD-9 to ICD-10. 5. All rates are age-adjusted per 100,000 residents using the 2000 US standard population. U.S. data for years 1994-1998 obtained from Compressed Mortality File on CDC Wonder, February 2001. 6. NA: comparability ratio is not applicable for years prior to 1994. 7. When comparing data over time between 1994 through 2004, please use the comparability modified rate for years 1994-1998. Resident death data for 2000-2005 are calculated using the Massachusetts (Department of Public Health) Modified Age, Race/Ethnicity, & Sex Estimates 2000-2005 (MMARS00-05), released October 2006. 8. U.S. data for 2005 obtained from NCHS. Deaths: Final Data for 2005. National Vital Statistics Report, January 2008.



**Table C-7. Top Ten\* Leading Underlying Causes of Death<sup>1</sup> by Age, Massachusetts: 2006**

Age Groups (number of deaths)									
Rank	<1 year	1-14 years	15-24 years	25-44 years	45-64 years	65-74 years	75-84 years	85+ years	All
1	Short gestation (114)	Unintentional Injuries (32)	Unintentional Injuries (206)	Unintentional Injuries (588)	Cancer (3,295)	Cancer (3,024)	Cancer (4,189)	Heart Disease (5,827)	Cancer (13,375)
2	Congenital malformations (52)	Cancer (19)	Homicide (70)	Cancer (323)	Heart Disease (1587)	Heart Disease (1,518)	Heart Disease (3,705)	Cancer (2,490)	Heart Disease (12,891)
3	SIDS (26)	Congenital malformations (7)	Suicide (43)	Heart Disease (231)	Unintentional Injuries (578)	Chronic Lower Respiratory Disease (491)	Stroke (972)	Stroke (1,362)	Stroke (2,868)
4	Pregnancy Complications (20)	Ill-defined conditions (6)	Cancer (34)	Suicide (158)	Chronic liver disease (272)	Stroke (292)	Chronic Lower Respiratory Disease (951)	Alzheimer's Disease (1,041)	Chronic Lower Respiratory Disease (2,529)
5	Complications of placenta (15)	Heart Disease (5)	Ill-defined conditions (22)	HIV/AIDS (77)	Chronic Lower Respiratory Disease (270)	Diabetes (194)	Influenza & Pneumonia (524)	Influenza & Pneumonia (936)	Unintentional Injuries (2,170)
6	Intrauterine Hypoxia (10)	Homicide (5)	Heart Disease (15)	Homicide (76)	Diabetes (239)	Nephritis (168)	Nephritis (442)	Chronic Lower Respiratory Disease (797)	Influenza & Pneumonia (1,748)
7	Neonatal hemorrhage (10)	Influenza & Pneumonia (4)	Congenital malformations (7)	Ill-defined conditions (68)	Stroke (205)	Septicemia (161)	Alzheimer's Disease (417)	Nephritis (620)	Alzheimer's Disease (1,556)
8	Unintentional Injuries (9)	Septicemia (2)	Stroke (4)	Stroke (32)	Suicide (189)	Influenza & Pneumonia (153)	Diabetes (365)	Unintentional Injuries (356)	Nephritis (1,390)
9	Bacterial sepsis of newborn (6)	In situ neoplasms (2)	Aortic aneurysm (4)	Chronic liver disease (29)	Septicemia (141)	Unintentional Injuries (141)	Septicemia (284)	Ill-defined conditions (315)	Diabetes (1,127)
10	Necrotizing enterocolitis (6)	Acute bronchitis (2)	Nephritis (3)	Diabetes (27)	Nephritis (137)	Chronic liver disease (90)	Unintentional Injuries (260)	Diabetes (299)	Septicemia (893)
All Causes	369	124	471	1,953	8,660	7,572	15,333	18,811	53,293

\* Ranking based on number of deaths. The number of deaths is shown in parentheses.

Injuries is subdivided into 4 separate categories by intent (unintentional, homicide, suicide) and injuries of undetermined intent (deaths where investigation has not determined whether injuries were accidental or purposely inflicted). 1. Cause of Death classified using ICD-10. See Section Definitions for a list of ICD-10 codes.

**Table C-8A. Leading Underlying Causes of Death\*, Numbers and Age-Specific Rates by Gender, Massachusetts: 2006**

Age	Cause of death <sup>1</sup>	<u>Total</u>		<u>Female</u>		<u>Male</u>	
		Number	Rate <sup>2</sup>	Number	Rate <sup>2</sup>	Number	Rate <sup>2</sup>
1-14 years	<b>TOTAL</b>	<b>124</b>	<b>11.2</b>	<b>54</b>	<b>10.0</b>	<b>70</b>	<b>12.3</b>
	Unintentional Injuries	32	2.9	8	1.5	24	4.2
	Cancer	19	1.7	10	1.8	9	1.6
	Congenital Malformations	7	0.6	4	— <sup>4</sup>	3	— <sup>4</sup>
	Signs and symptoms of Ill-Defined Conditions	6	0.5	4	— <sup>4</sup>	2	— <sup>4</sup>
15-24 years	<b>TOTAL</b>	<b>471</b>	<b>52.6</b>	<b>127</b>	<b>28.4</b>	<b>344</b>	<b>76.6</b>
	Unintentional Injuries	206	23.0	47	10.5	159	35.4
	Homicide	70	7.8	8	1.8	62	13.8
	Suicide	43	4.8	8	1.8	35	7.8
	Cancer	34	3.8	16	3.6	18	4.0
25-44 years	<b>TOTAL</b>	<b>1,953</b>	<b>107.2</b>	<b>647</b>	<b>70.4</b>	<b>1,306</b>	<b>144.6</b>
	Unintentional Injuries	588	32.3	137	14.9	451	49.9
	Cancer	323	17.7	171	18.6	152	16.8
	Heart Disease	231	12.7	53	5.8	178	19.7
	Suicide	158	8.7	40	4.4	118	13.1
45-64 years	<b>TOTAL</b>	<b>8,660</b>	<b>516.4</b>	<b>3,420</b>	<b>394.8</b>	<b>5,240</b>	<b>646.4</b>
	Cancer	3,295	196.5	1,556	179.6	1,739	646.4
	Heart Disease	1,587	94.6	428	49.4	1,159	214.5
	Unintentional Injuries	578	34.5	194	22.4	384	143.0
	Chronic Liver Disease	272	16.2	71	8.2	201	47.4
65+ years <sup>3</sup>	<b>TOTAL</b>	<b>41,716</b>	<b>4,873.6</b>	<b>24,081</b>	<b>4,738.9</b>	<b>17,635</b>	<b>5,070.4</b>
	Heart Disease	11,050	1,290.9	6,391	1,257.7	4,659	1,339.6
	Cancer	9,703	1,133.6	4,861	956.6	4,842	1,392.2
	Stroke	2,626	306.8	1,705	335.5	921	264.8
	Chronic Lower Respiratory Disease	2,239	261.6	1,306	257.0	933	268.3

1. Cause of Death classified using ICD-10. See Appendix for a list of ICD-10 codes. 2. Number of deaths per 100,000 residents in each age group. 3. See Table 8 for leading causes of death for detailed age groups for persons ages 65+ years. 4. Calculations based on values 1-4 are excluded.

\* Ranking based on number of deaths for all persons.

**Table C-8B. Leading Underlying Causes of Death, Numbers and Age-Specific Rates (Ages 65 and older) by Gender, Massachusetts: 2006**

Age	Cause of death <sup>1</sup>	Total		Female		Male	
		Number	Rate <sup>2</sup>	Number	Rate <sup>2</sup>	Number	Rate <sup>2</sup>
65-74 years	<b>TOTAL</b>	<b>7,572</b>	<b>1,848.3</b>	<b>3,354</b>	<b>1,498.1</b>	<b>4,218</b>	<b>2,270.2</b>
	Cancer	3,024	738.1	1,389	620.4	1,635	880.0
	Heart Disease	1,518	370.5	569	254.1	949	510.8
	Chronic Lower Respiratory Disease <sup>3</sup>	491	119.8	245	109.4	246	132.4
	Stroke	292	71.3	135	60.3	157	84.5
75-84 years	<b>TOTAL</b>	<b>15,333</b>	<b>4,958.0</b>	<b>7,986</b>	<b>4,262.3</b>	<b>7,347</b>	<b>6,027.3</b>
	Cancer	4,189	1,354.5	2,055	1,096.8	2,134	1,750.7
	Heart Disease	3,705	1,198.0	1,801	961.2	1,904	1,562.0
	Stroke	972	314.3	562	300.0	410	336.4
	Chronic Lower Respiratory Disease <sup>3</sup>	951	307.5	533	284.5	418	342.9
85+ years	<b>TOTAL</b>	<b>18,811</b>	<b>13,728.5</b>	<b>12,741</b>	<b>13,146.7</b>	<b>6,070</b>	<b>15,134.1</b>
	Heart Disease	5,827	4,252.6	4,021	4,149.0	1,806	4,502.8
	Cancer	2,490	1,817.2	1,417	1,462.1	1,073	2,675.3
	Stroke	1,362	994.0	1,008	1,040.1	354	882.6
	Alzheimer's Disease	1,041	759.7	830	856.4	211	526.1

1. Cause of Death classified according to ICD-10. See Section Definitions for a list of 10 codes. 2. Number of deaths per 100,000 residents in each age group. 3. The title of this cause of death has changed between ICD-10 and ICD-9. Chronic Lower Respiratory Disease (ICD-10 title) corresponds to Chronic Obstructive Pulmonary Disease (COPD) (ICD-9 title).

Figure C-3. Trends in Percentage of Deaths from Selected Causes, Massachusetts: 1842-2006

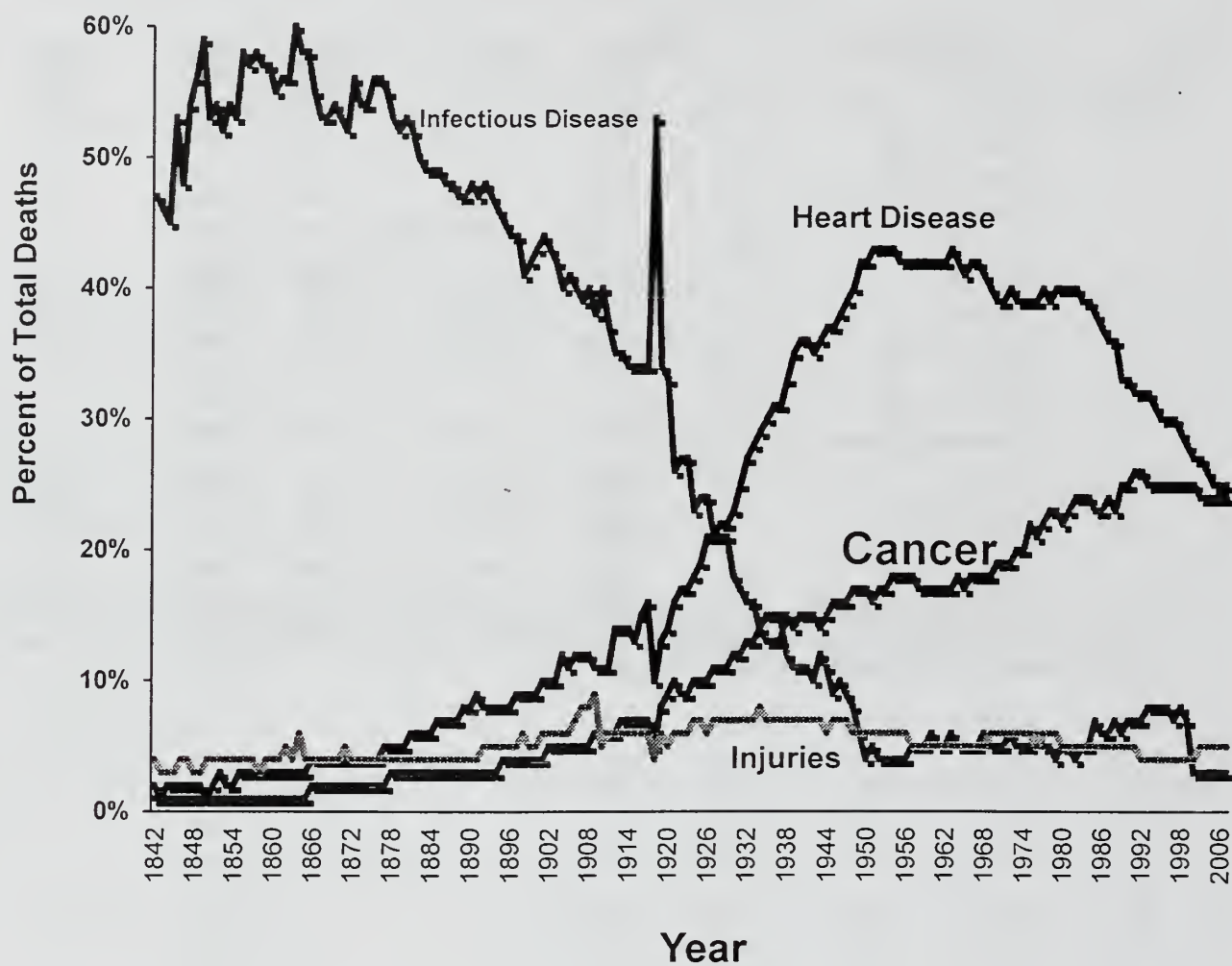




Table C-9. Leading Causes of Death<sup>1</sup> and Age-Adjusted Death Rates by Race and Hispanic Ethnicity, Massachusetts: 2006

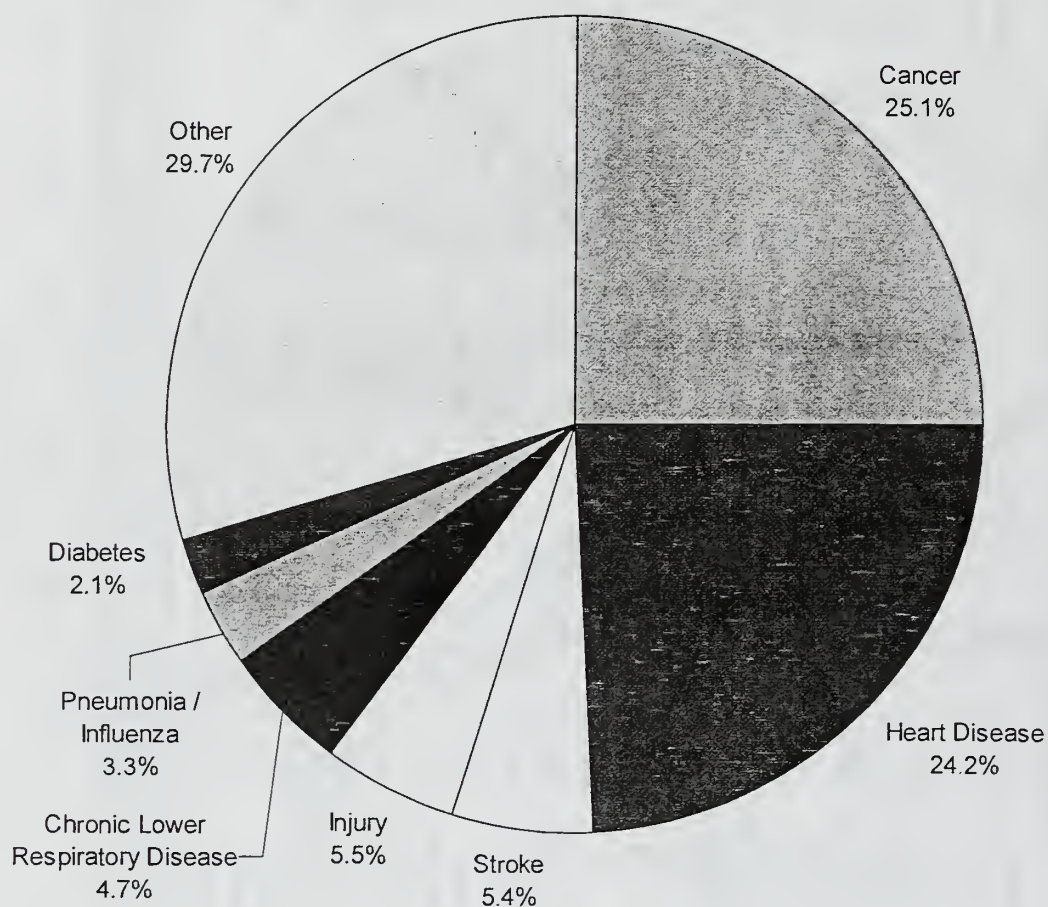
Cause <sup>3</sup>	<u>White non-Hispanic<sup>2</sup></u>			<u>Black non-Hispanic<sup>2</sup></u>			<u>Asian non-Hispanic<sup>2</sup></u>			<u>Hispanic</u>		
	#	Rate <sup>4</sup>	Cause	#	Rate	Cause	#	Rate	Cause	#	Rate	Cause
Total	49,132	723.3	Total	2,233	838.4	Total	635	379.0	Total	1,194	479.9	
Cancer	12,384	190.0	Cancer	555	212.4	Cancer	201	107.2	Cancer	218	93.7	
Heart disease	12,158	172.2	Heart Disease	403	165.3	Heart Disease	113	72.8	Heart Disease	196	102.3	
Stroke	2,623	36.7	Stroke	125	54.5	Stroke	57	39.2	Unintentional Injuries	129	28.4	
Chronic Lower Resp. Disease <sup>5</sup>	2,434	36.0	Unintentional injuries <sup>6</sup>	123	33.7	Unintentional injuries <sup>6</sup>	28	13.4	Stroke	58	28.8	
Unintentional injuries <sup>6</sup>	1,889	32.3	Diabetes	91	36.1	Chronic Lower Resp. Disease <sup>5</sup>	18	12.7	Diabetes	51	24.0	
Influenza and Pneumonia	1,662	22.9	Nephritis	90	37.0	Nephritis	17	11.9	HIV/AIDS	37	8.4	
Alzheimer's Disease	1,488	19.7	Homicide	81	18.2	Influenza and Pneumonia	15	10.6	Nephritis	35	16.9	
Nephritis	1,246	17.6	Chronic Lower Resp. Disease <sup>5</sup>	54	23.1	Suicide	14	4.3	Perinatal Conditions	34	5.1	
Diabetes	969	14.4	Septicemia	52	20.1	Diabetes	13	8.5	Ill-defined Conditions	31	7.6	
Septicemia	803	11.8	Perinatal Conditions	51	9.1	Alzheimer's Disease	12	9.6	Homicide	30	5.5	

### Total

Cause	#	Rate
Total	53,293	717.6
Cancer	13,375	186.3
Heart Disease	12,891	168.8
Stroke	2,868	37.4
Chronic Lower Respiratory Disease <sup>5</sup>	2,529	34.5
Unintentional injuries <sup>6</sup>	2,170	31.4
Influenza and Pneumonia	1,748	22.5
Alzheimer's Disease	1,556	19.3
Nephritis	1,390	18.3
Diabetes	1,127	15.3
Septicemia	893	12.1

1. Ranking based on number of deaths. 2. Race and ethnicity data in this table are presented as mutually exclusive categories. Persons of Hispanic ethnicity are not included in a race category. 3. Underlying Cause of Death based on ICD-10 (Please see Section Definitions for a list of ICD-10 codes used). 4. All rates are age-adjusted per 100,000 residents using the 2000 US standard population. 5. The title of this cause of death has changed between ICD-10 and ICD-9. Chronic Lower Respiratory Disease (ICD-10 title) corresponds to Chronic Obstructive Pulmonary Disease (COPD) (ICD-9 title). 6. Unintentional injuries such as motor vehicle-related and other transportation related deaths, falls, fires, and drownings that were not intended to occur.

**Figure C-4. Percent Distribution of Leading Underlying Causes of Death<sup>1</sup>,  
Massachusetts: 2006**



<sup>1</sup>Total Number of Deaths = 53,293  
Causes of Death are classified according to ICD-10

**Table C-10A. Number and Age-Specific Rates for Selected Causes of Death by Race and Hispanic Ethnicity, Massachusetts: 2006**

Selected Causes <sup>2</sup>	Total		White non-Hispanic <sup>1</sup>		Black non-Hispanic <sup>1</sup>		Asian non-Hispanic <sup>1</sup>		Hispanic	
	#	Rate <sup>3</sup>	#	Rate	#	Rate	#	Rate	#	Rate
<b>Age: 1-14, TOTAL</b>	124	11.2	79	9.6	14	15.0	8	13.4	21	16.2
Unintentional Injuries <sup>4</sup>	32	2.9	18	2.2	8	8.6	3	-- <sup>5</sup>	3	-- <sup>5</sup>
Cancer	19	1.7	15	1.8	1	-- <sup>5</sup>	2	-- <sup>5</sup>	1	-- <sup>5</sup>
Congenital malformations	7	0.6	5	0.6	1	-- <sup>5</sup>	0	0.0	1	-- <sup>5</sup>
Ill defined conditions	6	0.5	4	0.5	1	-- <sup>5</sup>	0	0.0	1	-- <sup>5</sup>
<b>Age: 15-24, TOTAL</b>	471	52.6	327	48.2	82	117.0	9	18.0	50	52.8
Unintentional Injuries <sup>4</sup>	206	23.0	168	24.8	18	25.7	0	0.0	20	21.1
Homicide	70	7.8	11	1.6	41	58.5	4	-- <sup>5</sup>	12	12.7
Suicide	43	4.8	37	5.5	0	0.0	1	-- <sup>5</sup>	5	5.3
Cancer	34	3.8	25	3.7	4	-- <sup>5</sup>	1	-- <sup>5</sup>	4	-- <sup>5</sup>
<b>Age: 25-44, TOTAL</b>	1,953	107.2	1,484	106.7	208	173.7	57	43.9	194	109.2
Unintentional Injuries <sup>4</sup>	588	32.3	483	34.7	35	29.2	9	6.9	61	34.3
Cancer	323	17.7	248	17.8	27	22.6	24	18.5	20	11.3
Heart Disease	231	12.7	191	13.7	25	20.9	4	-- <sup>5</sup>	10	5.6
Suicide	158	8.7	136	9.8	10	8.4	7	5.4	4	-- <sup>5</sup>
<b>Age: 45-64, TOTAL</b>	8,660	516.4	7,521	517.1	612	763.1	123	206.9	371	469.9
Cancer	3,295	196.5	2,926	201.2	203	253.1	65	109.3	92	116.5
Heart Disease	1,587	94.6	1,407	96.7	97	121.0	20	33.6	55	69.7
Unintentional Injuries <sup>4</sup>	578	34.5	493	33.9	44	54.9	5	8.4	35	44.3
Chronic liver disease	272	16.2	241	16.6	13	16.2	0	0.0	16	20.3
<b>Age: 65+, TOTAL</b>	41,716	4,873.6	39,501	5,031.6	1,242	4,350.9	428	2,154.9	495	2,343.6
Heart Disease	11,050	1,290.9	10,546	1,343.3	278	973.9	89	448.1	126	596.6
Cancer	9,703	1,133.6	9,169	1,167.9	320	1,121.0	109	548.8	101	478.2
Stroke	2,626	306.8	2,436	310.3	100	350.3	49	246.7	36	170.4
Chronic Lower Respiratory Disease <sup>6</sup>	2,239	261.6	2,164	275.6	42	147.1	18	90.6	15	71.0

1. Race and ethnicity data in this table are presented as mutually exclusive categories. Persons of Hispanic ethnicity are not included in a race category. Please see Table A1 in the Appendix for death data by race according to Federal definitions, which include persons of Hispanic ethnicity in a race category. Please see the Technical Notes in the Appendix for a more detailed explanation. 2. Deaths are coded according to ICD-10. Please see Appendix for a list of ICD-10 codes used in this table. 3. Number of deaths per 100,000 persons in each age group. 4. Unintentional injuries include injuries such as motor vehicle-related and other transportation related deaths, falls, fires, and drownings that were not intended to occur. 5. Calculations based on values 1-4 are excluded. 6. The title of this cause of death has changed between ICD-10 and ICD-9. Chronic Lower Respiratory Disease (ICD-10 title) corresponds to Chronic Obstructive Pulmonary Disease (COPD) (ICD-9 title).

**Table C-10B. Number and Age-Specific Rates for Selected Causes of Death by Race and Hispanic Ethnicity, Ages 65+, Massachusetts: 2006**

Selected Causes <sup>2</sup>	<u>Total</u>		<u>White non-Hispanic<sup>1</sup></u>		<u>Black non-Hispanic<sup>1</sup></u>		<u>Asian non-Hispanic<sup>1</sup></u>		<u>Hispanic</u>	
	#	Rate <sup>3</sup>	#	Rate	#	Rate	#	Rate	#	Rate
<b>Age: 65-74, TOTAL</b>	<b>7,572</b>	<b>1,848.3</b>	<b>6,887</b>	<b>1,874.0</b>	<b>361</b>	<b>2,195.7</b>	<b>114</b>	<b>946.1</b>	<b>197</b>	<b>1,520.4</b>
Cancer	3,024	738.1	2,803	762.7	124	754.2	43	356.8	53	409.0
Heart Disease	1,518	370.5	1,378	375.0	72	437.9	26	215.8	40	308.7
Chronic Lower Respiratory Disease <sup>4</sup>	491	119.8	468	127.3	10	60.8	6	49.8	7	54.0
Stroke	292	71.3	247	67.2	19	115.6	10	83.0	15	115.8
<b>Age: 75-84, TOTAL</b>	<b>15,333</b>	<b>4,958.0</b>	<b>14,492</b>	<b>5,031.5</b>	<b>469</b>	<b>5,249.6</b>	<b>176</b>	<b>2,963.0</b>	<b>169</b>	<b>2,859.6</b>
Cancer	4,189	1,354.5	3,983	1,382.9	124	1,388.0	45	757.6	34	575.3
Heart Disease	3,705	1,198.0	3,514	1,220.0	102	1,141.7	32	538.7	50	846.0
Stroke	972	314.3	895	310.7	41	458.9	22	370.4	10	169.2
Chronic Lower Respiratory Disease <sup>4</sup>	951	307.5	926	321.5	16	179.1	7	117.8	2	-- <sup>5</sup>
<b>Age: 85+, TOTAL</b>	<b>18,811</b>	<b>13,728.5</b>	<b>18,122</b>	<b>13,991.0</b>	<b>412</b>	<b>12,992.7</b>	<b>138</b>	<b>7,371.8</b>	<b>129</b>	<b>5,723.2</b>
Heart Disease	5,827	4,252.6	5,654	4,365.1	104	3,279.7	31	1,656.0	36	1,597.2
Cancer	2,490	1,817.2	2,383	1,839.8	72	2,270.6	21	1,121.8	14	621.1
Stroke	1,362	994.0	1,294	999.0	40	1,261.4	17	908.1	11	488.0
Alzheimer's Disease	1,041	759.7	1,000	772.0	24	756.9	10	534.2	6	266.2

1. Race and ethnicity data in this table are presented as mutually exclusive categories. Persons of Hispanic ethnicity are not included in a race category. 2. Deaths are coded according to ICD-10. Please see Section Definitions for a list of ICD-10 codes used in this table. 3. Number of deaths per 100,000 persons in each age group. 4. The title of this cause of death has changed between ICD-10 and ICD-9. Chronic Lower Respiratory Disease (ICD-10 title) corresponds to Chronic Obstructive Pulmonary Disease (COPD) (ICD-9 title). 5. Calculations based on values 1-4 are excluded.



**Table C-11. Leading Causes of Death<sup>1</sup> for Cape Verdean, non-Hispanics<sup>2</sup>,  
Massachusetts: 2006**

	Number	Percent
Heart Disease	43	21.2
Cancer	39	19.2
Stroke	13	6.4
Alzheimer's Disease	9	4.4
Chronic Lower Respiratory Disease <sup>3</sup>	9	4.4
Nephritis	9	4.4
Unintentional Injuries	9	4.4
Homicide	8	3.9
Diabetes	5	2.5
Other Causes	59	29.1
<b>All Deaths</b>	<b>203</b>	<b>100.0</b>

1. Deaths are coded according to ICD-10. Please see Section Definitions for a list of ICD-10 codes used in this table. 2. Historically, MA DPH has followed federal definitions of race and ethnicity and has reported death rates for white, black, Asian races including persons of Hispanic origin; and Hispanic ethnicity. Furthermore, Cape Verdeans have been included with blacks, to be consistent with the National Center for Health Statistics. Starting with Deaths 1999, in all tables where data were classified by race and ethnicity, we presented mutually exclusive categories of white non-Hispanic; black non-Hispanic; Asian non-Hispanic; and Hispanic. Here, we separate Cape Verdeans from the Black non-Hispanic group. 3. The title of this cause of death has changed between ICD-10 and ICD-9. Chronic Lower Respiratory Disease (ICD-10 title) corresponds to Chronic Obstructive Pulmonary Disease (COPD) (ICD-9 title).

Table C-12. Heart Disease Deaths by Race and Gender, Age-Adjusted Rates<sup>1</sup>, Massachusetts: 1999-2006

Heart Disease						
Year	<u>White non-Hispanic<sup>2</sup></u>		Total	<u>Black non-Hispanic<sup>2</sup></u>		Total
	Male	Female		Male	Female	
1999	289.8	178.4	224.3	296.5	211.5	248.0
2000	282.4	174.4	219.3	235.1	203.6	221.9
2001	265.9	174.0	213.4	295.2	181.3	228.6
2002	254.7	163.5	202.3	242.2	177.6	205.9
2003	250.3	160.2	198.5	272.1	188.5	223.9
2004	233.1	150.3	185.7	268.1	148.3	198.8
2005	220.6	139.1	174.9	233.7	174.5	199.8
2006	216.5	138.8	172.2	222.3	127.6	165.3
<hr/>						
Year	<u>Asian non-Hispanic<sup>2</sup></u>		Total	<u>Hispanic</u>		Total
	Male	Female		Male	Female	
1999	119.6	73.7	94.7	143.4	83.5	108.2
2000	111.2	65.5	85.6	122.1	106.6	115.6
2001	113.5	62.6	85.1	148.7	110.0	126.9
2002	94.6	69.5	79.9	174.1	101.2	131.9
2003	115.2	65.0	87.6	124.8	96.2	109.7
2004	56.9	54.3	56.1	129.9	77.4	100.3
2005	77.5	48.2	61.3	118.5	83.7	99.2
2006	73.6	70.0	72.8	124.2	84.9	102.3

1. Rates are per 100,000 age-adjusted to the 2000 US standard population. 2. Race and ethnicity data in this table are presented as mutually exclusive categories. Persons of Hispanic ethnicity are not included in a race category.

Table C-13. Cancer Deaths by Race and Gender, Age-Adjusted Rates<sup>1</sup>, Massachusetts: 1999-2006

Cancer						
Year	<u>White non-Hispanic<sup>2</sup></u>		Total	<u>Black non-Hispanic<sup>2</sup></u>		Total
	Male	Female		Male	Female	
1999	263.4	174.3	207.7	337.2	195.7	251.5
2000	258.7	179.0	209.0	348.1	167.4	237.8
2001	249.2	175.8	203.5	264.7	176.4	212.1
2002	245.7	175.3	202.2	293.5	179.5	224.3
2003	237.1	169.4	195.7	304.5	199.0	238.7
2004	230.4	168.4	192.5	277.6	155.7	200.1
2005	226.1	163.2	188.1	264.2	168.1	204.1
2006	234.9	161.5	190.0	265.6	180.9	212.4
-----						
Year	<u>Asian non-Hispanic<sup>2</sup></u>		Total	<u>Hispanic</u>		Total
	Male	Female		Male	Female	
1999	162.8	116.9	136.7	141.8	92.5	113.8
2000	104.7	92.1	99.0	151.9	104.5	123.8
2001	98.3	105.6	103.1	142.9	97.4	116.4
2002	145.8	90.0	114.3	144.3	103.3	120.6
2003	134.6	87.4	109.3	110.0	76.6	90.0
2004	109.5	79.7	93.1	125.6	82.5	100.4
2005	138.9	79.5	106.1	118.2	97.3	105.7
2006	126.0	91.7	107.2	119.9	74.3	93.7

1. Rates are per 100,000 age-adjusted to the 2000 US standard population. 2. Race and ethnicity data in this table are presented as mutually exclusive categories. Persons of Hispanic ethnicity are not included in a race category.

**Table C-14. Number and Age-Adjusted Rates of Cancer Deaths by Selected Causes and Gender, Massachusetts: 2006**

Cause of Death <sup>1</sup>	ICD-10 Code	Total		Female		Male	
		#	Rate <sup>2,3</sup>	#	Rate	#	Rate
<b>Total Cancer Deaths</b>	<b>C00-C97</b>	<b>13,375</b>	<b>186.3</b>	<b>6,614</b>	<b>158.0</b>	<b>6,761</b>	<b>230.5</b>
Bladder	C67	355	4.8	94	2.0	261	9.3
Brain and nervous system	C70-C72	296	4.2	121	3.1	175	5.6
Cervix	C53	51	1.4	51	1.4	NA	NA
Colorectal	C18-C21	1,247	17.1	630	14.1	617	21.2
Esophagus	C15	393	5.5	86	2.0	307	10.0
Female breast	C50 <sup>4</sup>	962	23.2	962	23.2	NA	NA
Hodgkin's disease	C81	26	0.4	13	0.3	13	0.4
Kidney and other urinary organs	C64, C65	292	4.1	113	2.7	179	6.1
Leukemia	C91-C95	518	7.3	232	5.5	286	9.8
Lung	C33, C34	3,717	52.6	1,758	43.3	1,959	66.1
Melanoma of the skin	C43	214	3.0	85	2.0	129	4.3
Multiple myeloma	C88, C90	244	3.4	115	2.7	129	4.5
Non-Hodgkin's lymphoma	C82-C85	488	6.8	236	5.4	252	8.8
Ovary	C56	386	9.5	386	9.5	NA	NA
Pancreas	C25	810	11.3	419	9.9	391	13.1
Prostate	C61	672	24.5	NA	NA	672	24.5
Stomach	C16	264	3.6	95	2.1	169	5.8
Uterus	C54, C55	180	4.3	180	4.3	NA	NA
All other cancers	Residual	2,260	31.3	1,038	24.4	1,222	41.0

1. Common terms are used to describe the causes of cancer deaths. For detailed terminology of cancer sites, please see the ICD-10 code list in the Section Definitions. 2. All rates are age-adjusted by the direct method using the 2000 US standard population. Rates are per 100,000 population. 3. The total resident population is used to calculate all "Total Rates" except for a list of 10 C50, C53-C56, which are based on the total female population, and ICD-10 C61, which is based on the total male population. 4. Includes only female breast cancer.



**Table C-15. Selected Causes of Cancer Deaths by Age, Massachusetts: 2006**

Age	Cause of death <sup>1</sup>	ICD-10 Code	Number	Age-specific rate <sup>2</sup>
1 - 14 years	TOTAL		19	1.7
	Leukemia	C91-C95	6	0.5
	Brain and nervous system	C70-C72	4	-- <sup>3</sup>
15 - 24 years	TOTAL		34	3.8
	Leukemia	C91-C95	13	1.5
	Brain and nervous system	C70-C72	7	0.8
	Cervix	C53	2	-- <sup>3</sup>
	Non-Hodgkin's Lymphoma	C82-C85	2	-- <sup>3</sup>
25 - 44 years	TOTAL		323	17.7
	Female breast <sup>4</sup>	C50	54	5.9
	Lung	C33, C34	47	2.6
	Colorectal	C18-C21	34	1.9
	Leukemia	C91-C95	19	1.0
45 - 64 years	TOTAL		3,295	196.5
	Lung	C33, C34	983	58.6
	Female breast <sup>4</sup>	C50	327	37.7
	Colorectal	C18-C21	249	14.8
	Pancreas	C25	205	12.2
65 + years	TOTAL		9,703	1,133.6
	Lung	C33, C34	2,687	313.9
	Colorectal	C18-C21	963	112.5
	Prostate <sup>5</sup>	C61	624	179.4
	Pancreas	C25	599	70.0
65 - 74 years	TOTAL		3,024	738.1
	Lung	C33, C34	1,035	252.6
	Colorectal	C18-C21	234	57.1
	Pancreas	C25	198	48.3
	Female breast <sup>4</sup>	C50	163	72.8
75 - 84 years	TOTAL		4,189	1,354.5
	Lung	C33, C34	1,203	389.0
	Colorectal	C18-C21	392	126.8
	Pancreas	C25	263	85.0
	Prostate <sup>5</sup>	C61	253	207.6
85+ years	TOTAL		2,490	1,817.2
	Lung	C33, C34	449	327.7
	Colorectal	C18-C21	337	245.9
	Prostate <sup>5</sup>	C61	248	618.3
	Female Breast <sup>4</sup>	C50	190	196.1

1. Common terms are used to describe causes of cancer death. For detailed terminology, please see the ICD-10 codes listed in the Section Definitions. 2. Number of deaths per 100,000 residents in each age group. 3. Calculations based on fewer than five events are excluded. 4. Calculation based on female population in specified age group. 5. Calculation based on male population in specified age group.

**Table C-16. Leading Causes of Cancer Deaths and Age-Adjusted Rates by Race and Hispanic Ethnicity, Massachusetts: 2006**

Cause <sup>2</sup>	<u>White non-Hispanic<sup>1</sup></u>			<u>Black non-Hispanic<sup>1</sup></u>			<u>Asian non-Hispanic<sup>1</sup></u>			<u>Hispanic</u>		
	#	Rate <sup>3</sup>	Cause	#	Rate	Cause	#	Rate	Cause	#	Rate	Cause
Lung	3,496	54.6	Lung	132	51.3	Lung	54	31.4	Lung	31	12.2	
Colorectal	1,147	17.1	Female Breast <sup>4</sup>	59	35.3	Colorectal	20	9.6	Colorectal	22	9.6	
Female Breast <sup>4</sup>	867	23.3	Colorectal	57	22.8	Female Breast <sup>4</sup>	14	11.2	Female Breast <sup>4</sup>	20	14.0	
Pancreas	750	11.5	Pancreas	31	12.6	Pancreas	12	7.0	Pancreas	16	6.8	
Prostate	632	25.0	Prostate	30	36.0	Esophagus	8	5.0	Non-Hodgkin's Lymphoma	13	6.8	
<b>Total Cancer</b>	<b>12,384</b>	<b>190.0</b>	<b>Total Cancer</b>	<b>555</b>	<b>212.4</b>	<b>Total Cancer</b>	<b>201</b>	<b>107.2</b>	<b>Total Cancer</b>	<b>217</b>	<b>93.4</b>	

1. Race and ethnicity data in this table are presented as mutually exclusive categories. Persons of Hispanic ethnicity are not included in a race category. 2. ICD-10 codes used. Please see the ICD-10 codes listing in the Section Definitions for detailed terminology. 3. All rates are age-adjusted by the direct method using the 2000 US standard population. Rates are per 100,000 population. 4. Calculation based on female population in specified age group.

**Table C-17. Number, Percent, and Age-Adjusted Rates of Stroke Deaths by Type and Gender, Massachusetts: 2006**

Cause of Death <sup>1</sup>	ICD-10 Code	Total			Female			Male		
		#	%	Rate <sup>1</sup>	#	%	Rate <sup>1</sup>	#	%	Rate <sup>1</sup>
<b>Total Stroke Deaths</b>	<b>I60-I69</b>	<b>2,868</b>	<b>100%</b>	<b>37.4</b>	<b>1,815</b>	<b>100%</b>	<b>36.4</b>	<b>1,053</b>	<b>100%</b>	<b>38</b>
Subarachnoid hemorrhage	I60	112	3.9%	1.6	75	4.1%	1.8	37	3.5%	1.2
Intracerebral and other intracranial hemorrhage	I61-I62	575	20.0%	7.8	331	18.2%	7.3	244	23.2%	8.6
Cerebral infarction	I63	153	5.3%	2	92	5.1%	1.9	61	5.8%	2.2
Stroke, not specified	I64	1,443	50.3%	18.5	959	52.8%	18.5	484	46.0%	17.7
Other	I67, I69	585	20.4%	7.6	358	19.7%	7	227	21.6%	8.3

1. All rates are age-adjusted by the direct method using the 2000 US standard population. Rates are per 100,000 population.

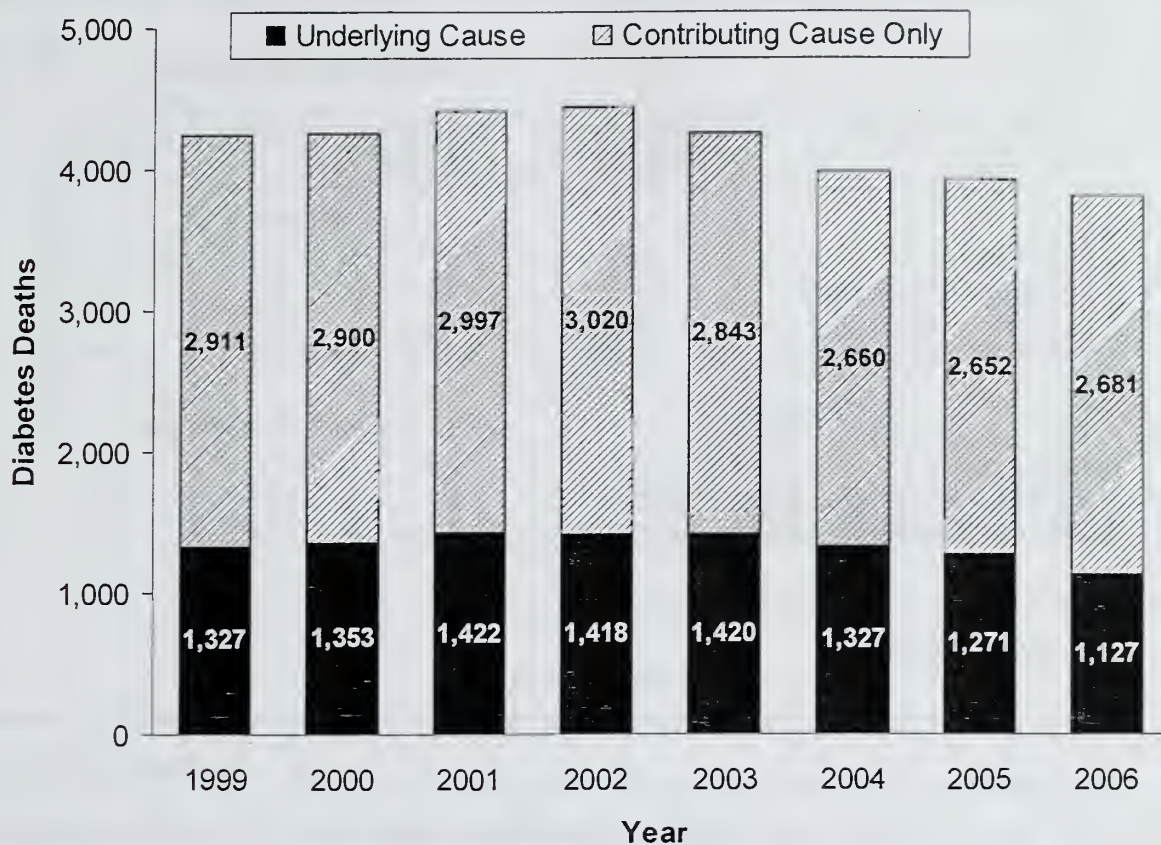
Table C-18. Stroke Deaths by Race and Gender, Age-Adjusted Rates<sup>1</sup>, Massachusetts: 1999-2006

Year	<u>White non-Hispanic<sup>2</sup></u>		Total	<u>Black non-Hispanic<sup>2</sup></u>		Total
	Male	Female		Male	Female	
1999	52.1	48.5	50.2	71.5	47.5	57.5
2000	48.8	50.6	50.5	65.3	56.4	60.8
2001	51.5	46.0	48.5	50.8	61.5	59.3
2002	50.2	45.7	47.9	57.9	60.2	59.5
2003	44.7	43.9	44.7	45.9	54.9	52.7
2004	42.8	40.4	41.9	52.1	58.3	56.2
2005	37.7	37.3	37.9	50.6	44.9	47.5
2006	37.5	35.6	36.7	57.6	51.9	54.5
-----						
Year	<u>Asian non-Hispanic<sup>2</sup></u>		Total	<u>Hispanic</u>		Total
	Male	Female		Male	Female	
1999	51.3	28.6	37.6	38.3	30.0	33.8
2000	50.9	49.4	50.4	40.6	47.1	45.0
2001	23.8	38.0	32.0	39.4	28.5	33.2
2002	21.2	28.7	25.6	49.6	30.2	38.3
2003	39.3	28.7	33.4	44.3	36.0	39.3
2004	35.2	32.7	34.1	39.7	32.6	35.5
2005	28.2	27.5	28.1	33.2	24.5	28.2
2006	34.5	41.9	39.2	26.5	29.6	28.8

1. Rates are per 100,000 age-adjusted to the 2000 US standard population. 2. Race and ethnicity data in this table are presented as mutually exclusive categories. Persons of Hispanic ethnicity are not included in a race category.



Figure C-5. Diabetes Deaths<sup>1</sup>, Massachusetts: 1999-2006



<sup>1</sup> ICD-10: E10-E14

Table C-19. Diabetes Deaths<sup>1</sup> by Gender, Massachusetts: 2006

Cause of death	Proportion of all deaths (%)			Number		
	Males	Females	Total	Males	Females	Total
Underlying	2.3%	2.0%	2.1%	569	558	1,127
Contributing/Associated	5.3%	4.8%	5.0%	1,316	1,365	2,681
Total diabetes-related	7.6%	6.7%	7.1%	1,885	1,923	3,808
<i>Total deaths (all causes)</i>	<i>100</i>	<i>100</i>	<i>100</i>	<i>24,785</i>	<i>28,508</i>	<i>53,293</i>

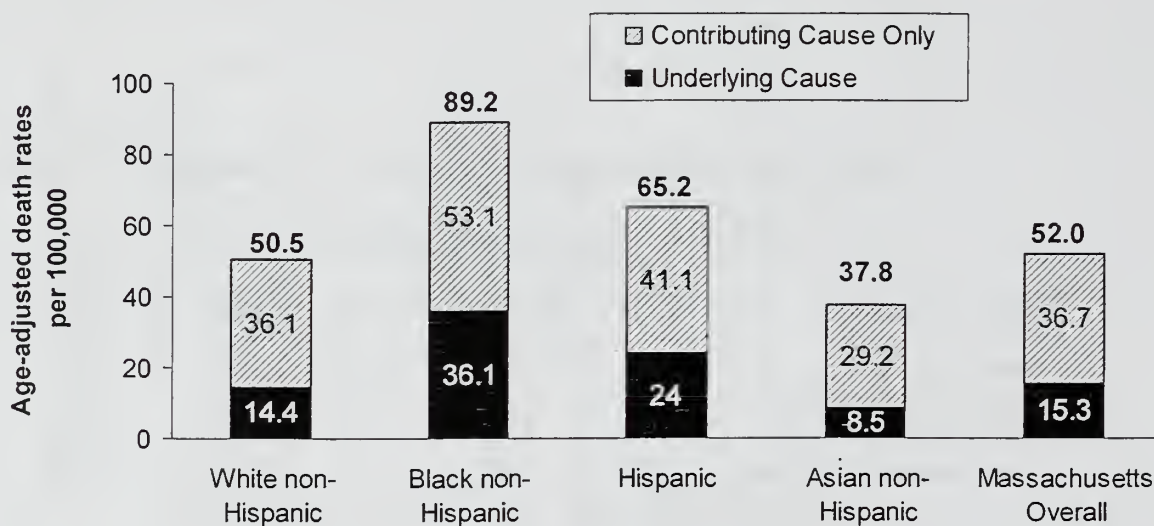
<sup>1</sup> ICD-10: E10-E14

**Table C-20. Diabetes Deaths<sup>1</sup> by Race and Hispanic Ethnicity, Massachusetts: 2006**

Cause of death	Race/Hispanic Ethnicity				
	White non-Hispanic	Black non-Hispanic	Hispanic	Asian non-Hispanic	Total
	Number				
Underlying	969	91	51	13	1,127
Contributing/Associated	2,427	128	80	43	2,681
<i>Total diabetes-related</i>	3,396	219	131	56	3,808
<i>Total deaths (all causes)</i>	<b>49,132</b>	<b>2,233</b>	<b>1,194</b>	<b>635</b>	<b>53,293</b>
	Proportion of all deaths (%)				
Underlying	2.0	4.1	4.3	2.0	2.1
Contributing/Associated	4.9	5.7	6.7	6.8	5.0
<i>Total diabetes-related</i>	<b>6.9</b>	<b>9.8</b>	<b>11.0</b>	<b>8.8</b>	<b>7.1</b>

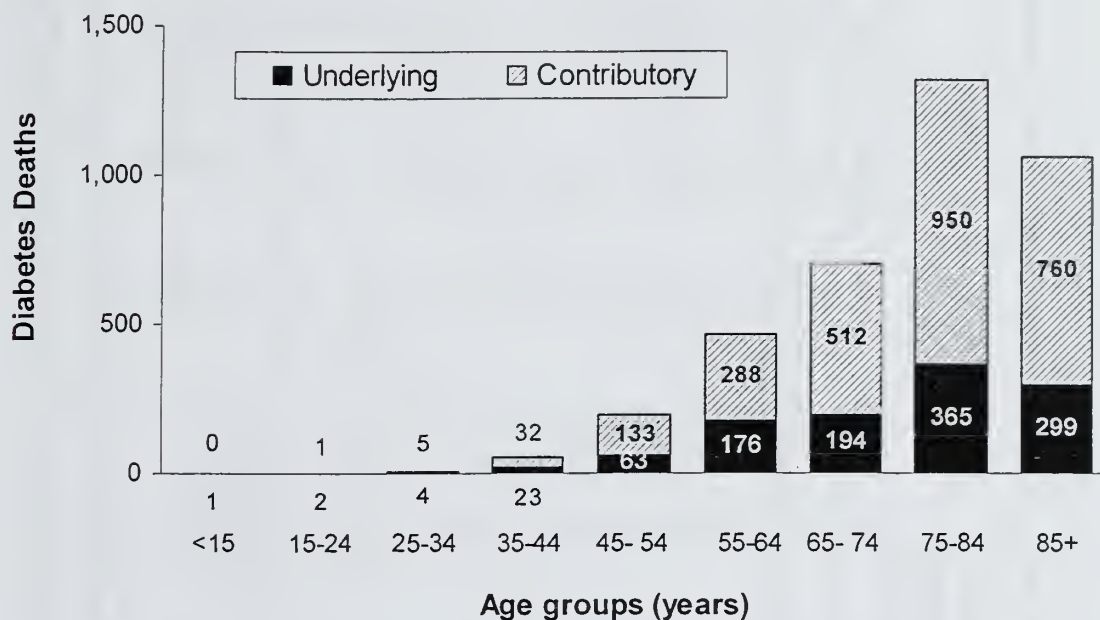
<sup>1</sup> ICD-10: E10-E14

**Figure C-6. Diabetes Death<sup>1</sup> Rates by Race and Hispanic Ethnicity, Massachusetts: 2006**



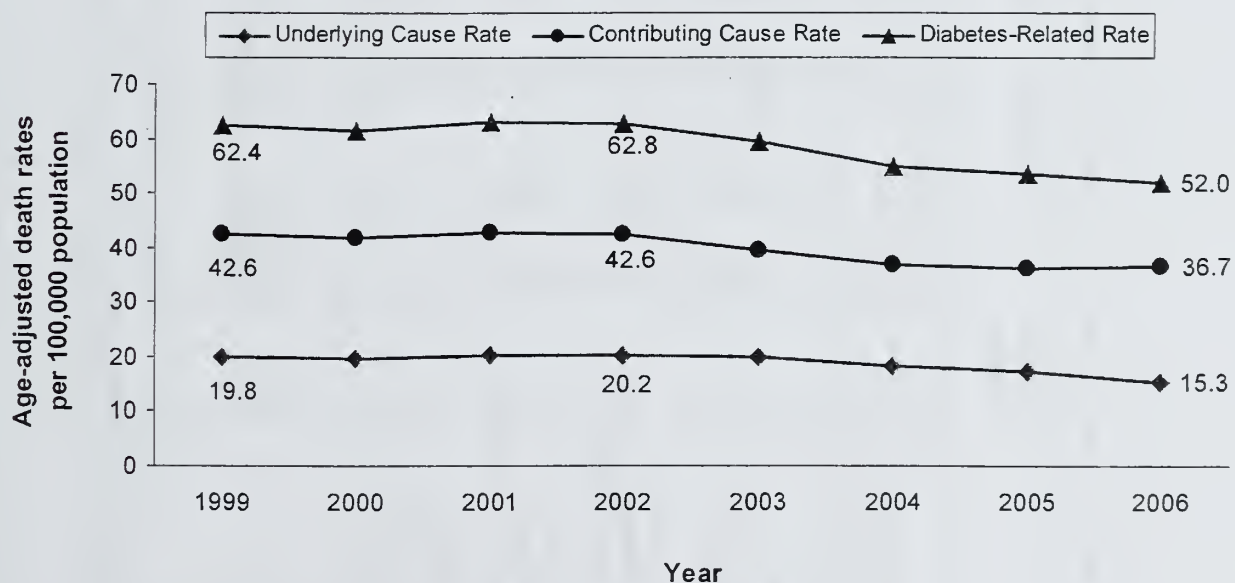
<sup>1</sup> ICD-10: E10-E14

Figure C-7. Age Distribution of Diabetes Deaths<sup>1</sup>,  
Massachusetts: 2006



<sup>1</sup> ICD-10: E10-E14

Figure C-8. Diabetes Death<sup>1</sup> Rates, Massachusetts: 1999-2006



<sup>1</sup> ICD-10: E10-E14

Table C-21. Injury Deaths<sup>1</sup> by Leading Causes, Gender, Age: Numbers, Age-Adjusted, and Age-Specific Rates, Massachusetts: 2006

	All Injury Deaths		Poisoning <sup>2</sup>		Motor Vehicle-related <sup>3</sup>		Hanging, strangulation, or suffocation		Falls		Firearm		Other <sup>4</sup>	
	Number	Rate <sup>5</sup>	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
All Persons	2,910	42.5	989	14.9	475	7.2	285	4.2	424	5.6	207	3.2	530	7.5
<1	11	13.8	0	0.0	0	0.0	6	7.5	0	0.0	1	-- <sup>6</sup>	4	-- <sup>6</sup>
1-14	41	3.7	1	-- <sup>6</sup>	12	1.1	6	0.5	1	-- <sup>6</sup>	1	-- <sup>6</sup>	20	1.8
15-24	325	38.2	70	8.2	119	14.0	28	3.3	7	0.8	64	7.5	37	4.3
25-44	851	45.3	454	24.2	122	6.5	80	4.3	17	0.9	78	4.2	100	5.3
45-64	839	51.9	434	26.8	124	7.7	73	4.5	58	3.6	48	3.0	102	6.3
65-74	178	45.6	14	3.6	35	9.0	24	6.2	56	14.4	6	1.5	43	11.0
75-84	296	92.4	14	4.4	41	12.8	30	9.4	116	36.2	6	1.9	89	27.8
85+	369	259.2	2	-- <sup>6</sup>	22	15.5	38	26.7	169	118.7	3	-- <sup>6</sup>	135	94.8
All Females	1,036	26.3	332	9.6	141	4.0	85	2.2	218	4.5	22	0.6	238	5.4
<1	4	-- <sup>6</sup>	0	0.0	0	0.0	2	-- <sup>6</sup>	0	0.0	1	-- <sup>6</sup>	1	-- <sup>6</sup>
1-14	11	2.0	0	0.0	3	-- <sup>6</sup>	1	-- <sup>6</sup>	0	0.0	0	0.0	7	1.3
15-24	64	15.3	12	2.9	34	8.1	7	1.7	2	-- <sup>6</sup>	3	-- <sup>6</sup>	6	1.4
25-44	202	21.2	124	13.0	22	2.3	19	2.0	5	0.5	9	0.9	23	2.4
45-64	286	34.2	177	21.2	38	4.5	15	1.8	15	1.8	6	0.7	35	4.2
65-74	71	33.2	10	4.7	13	6.1	7	3.3	24	11.2	0	0.0	17	7.9
75-84	160	82.7	8	4.1	21	10.9	14	7.2	65	33.6	2	-- <sup>6</sup>	50	25.8
85+	238	241.8	1	-- <sup>6</sup>	10	10.2	20	20.3	107	108.7	1	-- <sup>6</sup>	99	100.6
All Males	1,874	59.8	657	20.4	334	10.6	200	6.5	206	7.0	185	5.8	292	9.6
<1	7	17.2	0	0.0	0	0.0	4	-- <sup>6</sup>	0	0.0	0	0.0	3	-- <sup>6</sup>
1-14	30	5.2	1	-- <sup>6</sup>	9	1.6	5	0.9	1	-- <sup>6</sup>	1	-- <sup>6</sup>	13	2.3
15-24	261	60.4	58	13.4	85	19.7	21	4.9	5	1.2	61	14.1	31	7.2
25-44	649	70.0	330	35.6	100	10.8	61	6.6	12	1.3	69	7.4	77	8.3
45-64	553	70.8	257	32.9	86	11.0	58	7.4	43	5.5	42	5.4	67	8.6
65-74	107	60.8	4	-- <sup>6</sup>	22	12.5	17	9.7	32	18.2	6	3.4	26	14.8
75-84	136	107.1	6	4.7	20	15.7	16	12.6	51	40.1	4	-- <sup>6</sup>	39	30.7
85+	131	298.4	1	-- <sup>6</sup>	12	27.3	18	41.0	62	141.2	2	-- <sup>6</sup>	36	82.0

1. Data presented in this table are classified according to ICD-10. Please see Section Definitions for a list of ICD-10 codes used in this table. 2. Includes drug overdoses, which account for the largest percentage (74%). 3. Motor vehicle deaths to occupants, pedestrians, bicyclists, and bicyclists. 4. All remaining injury causes. 5. Number of deaths per 100,000 persons in each age group; rates for all rows except the age group rows are age-adjusted to the 2000 US standard population. 6. Calculations based on values 1-4 are excluded.



**Table C-22. Injury Deaths<sup>1</sup> by Leading Causes, Gender and Race and Hispanic Ethnicity: Numbers and Age Adjusted Rates,  
Massachusetts: 2006**

	All Injury Deaths		Poisoning <sup>2</sup>		Motor Vehicle-related <sup>3</sup>		Hanging, strangulation, or suffocation		Falls		Firearm		Other <sup>4</sup>	
	Number	Rate <sup>5</sup>	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
White non-Hispanic	2,453	42.3	853	15.8	391	7.2	254	4.4	395	5.7	110	2.0	450	7.2
Females	929	27.2	299	10.5	120	4.1	75	2.2	204	4.5	17	0.6	214	5.3
Males	1,524	58.4	554	21.3	271	10.5	179	6.9	191	7.1	93	3.5	236	9.1
Black non-Hispanic	231	60.6	66	18.1	35	9.1	11	2.5	9	3.5	69	15.6	41	11.7
Females	54	28.9	23	12.1	7	3.7	3	-- <sup>6</sup>	6	3.7	4	-- <sup>6</sup>	11	6.1
Males	177	94.9	43	24.8	28	14.9	8	3.8	3	-- <sup>6</sup>	65	29.6	30	18.4
Asian non-Hispanic	47	20.0	4	-- <sup>6</sup>	11	4.5	10	3.6	9	6.1	5	1.3	8	3.5
Females	23	19.7	1	-- <sup>6</sup>	5	4.1	5	3.7	5	5.7	1	-- <sup>6</sup>	6	5.2
Males	24	20.8	3	-- <sup>6</sup>	6	5.0	5	3.4	4	-- <sup>6</sup>	4	-- <sup>6</sup>	2	-- <sup>6</sup>
Hispanic	175	37.2	66	13.8	38	6.6	9	1.6	10	4.0	22	3.4	30	7.7
Females	28	15.8	9	4.4	9	3.9	1	-- <sup>6</sup>	3	-- <sup>6</sup>	0	0.0	6	4.2
Males	147	62.3	57	24.8	29	9.7	8	3.0	7	5.7	22	6.8	24	12.4

1. Data presented in this table are classified according to ICD-10. Please see Section Definitions for a list of ICD-10 codes used in this table. 2. Includes drug overdoses, which account for the largest percentage (74%). 3. Motor vehicle deaths to occupants, pedestrians, bicyclists and bicyclists. 4. All remaining injury causes. 5. Number of deaths per 100,000 persons in each group; rates are age-adjusted to the 2000 US standard population. 6. Calculations based on values 1-4 are excluded.

**TableC-23. Unintentional Injury Deaths<sup>1</sup> by Gender, Age: Numbers, Age-Adjusted, and Age-Specific Rates, Massachusetts: 2006**

	All Unintentional		Poisonings		Motor Vehicle-related		Falls	
	Number	Rate <sup>2</sup>	Number	Rate <sup>2</sup>	Number	Rate <sup>2</sup>	Number	Rate <sup>2</sup>
<b>All Persons</b>	<b>2,170</b>	<b>31.4</b>	<b>821</b>	<b>12.4</b>	<b>475</b>	<b>7.1</b>	<b>406</b>	<b>5.4</b>
<1	9	11.7	0	0.0	0	0.0	0	0.0
1-14	32	2.9	1	— <sup>3</sup>	12	1.1	1	— <sup>3</sup>
15-24	206	23.0	62	6.9	119	13.3	5	0.6
25-44	588	32.3	404	22.2	122	6.7	12	0.7
45-64	578	34.5	341	20.3	124	7.4	48	2.9
65-74	141	34.4	4	— <sup>3</sup>	35	8.5	56	13.7
75-84	260	84.1	8	2.6	41	13.3	115	37.2
85+	356	259.8	1	— <sup>3</sup>	22	16.1	169	123.3
<b>All Females</b>	<b>817</b>	<b>20.1</b>	<b>241</b>	<b>7.0</b>	<b>141</b>	<b>3.9</b>	<b>212</b>	<b>4.4</b>
<1	3	— <sup>3</sup>	0	0.0	0	0.0	0	0.0
1-14	8	1.5	0	0.0	3	— <sup>3</sup>	0	0.0
15-24	47	10.5	9	2.0	34	7.6	1	— <sup>3</sup>
25-44	137	14.9	102	11.1	22	2.4	2	— <sup>3</sup>
45-64	194	22.4	124	14.3	38	4.4	13	1.5
65-74	55	24.6	2	— <sup>3</sup>	13	5.8	24	10.7
75-84	142	75.8	4	— <sup>3</sup>	21	11.2	65	34.7
85+	231	238.4	0	0.0	10	10.3	107	110.4
<b>All Males</b>	<b>1,353</b>	<b>43.7</b>	<b>580</b>	<b>18.0</b>	<b>334</b>	<b>10.6</b>	<b>194</b>	<b>6.8</b>
<1	6	15.3	0	0.0	0	0.0	0	0.0
1-14	24	4.2	1	— <sup>3</sup>	9	1.6	1	— <sup>3</sup>
15-24	159	35.4	53	11.8	85	18.9	4	— <sup>3</sup>
25-44	451	49.9	302	33.4	100	11.1	10	1.1
45-64	384	47.4	217	26.8	86	10.6	35	4.3
65-74	86	46.3	2	— <sup>3</sup>	22	11.8	32	17.2
75-84	118	96.8	4	— <sup>3</sup>	20	16.4	50	41.0
85+	125	311.7	1	— <sup>3</sup>	12	29.9	62	154.6

1. Data presented in this table are classified according to ICD-10. Please see Section Definitions for a list of ICD-10 codes used in this table. 2. Number of deaths per 100,000 persons in each age group; rates for all rows except the age group rows are age-adjusted to the 2000 US standard population. 3. Calculations based on values 1-4 are excluded.

**Table C-24. Unintentional Injury Deaths<sup>1</sup> by Gender and Race and Hispanic Ethnicity: Numbers, and Age-Adjusted Rates, Massachusetts: 2006**

	All Unintentional		Poisonings		Motor Vehicle-related		Falls	
	Number	Rate <sup>2</sup>	Number	Rate <sup>2</sup>	Number	Rate <sup>2</sup>	Number	Rate <sup>2</sup>
White non-Hispanic	1,889	32.3	694	13.1	391	7.1	382	5.5
Females	741	20.9	213	7.7	120	4.0	201	4.5
Males	1,148	44.7	481	18.7	271	10.5	181	7.0
Black non-Hispanic	123	33.7	59	15.7	35	8.8	6	2.7
Females	36	19.2	19	9.7	7	3.6	4	— <sup>3</sup>
Males	87	50.2	40	22.2	28	14.3	2	— <sup>3</sup>
Asian non-Hispanic	28	13.4	4	— <sup>3</sup>	11	4.3	8	5.7
Females	15	13.8	1	— <sup>3</sup>	5	3.9	4	— <sup>3</sup>
Males	13	13.3	3	— <sup>3</sup>	6	4.8	4	— <sup>3</sup>
Hispanic	129	28.4	64	13.4	38	6.6	10	4.0
Females	24	12.7	8	3.7	9	3.7	3	— <sup>3</sup>
Males	105	44.4	56	23.5	29	9.4	7	5.2

1. Data presented in this table are classified according to ICD-10. Please see Section Definitions for a list of ICD-10 codes used in this table. 2. Number of deaths per 100,000 persons in each group; rates are age-adjusted to the 2000 US standard population. 3. Calculations based on values 1-4 are excluded.

**Table C-25. Intentional Injury Deaths<sup>1</sup> by Gender, Age: Numbers, Age-Adjusted, and Age-Specific Rates, Massachusetts: 2006**

	All Intentional		Suicide		Homicide	
	<u>Number</u>	<u>Rate<sup>2</sup></u>	<u>Number</u>	<u>Rate<sup>2</sup></u>	<u>Number</u>	<u>Rate<sup>2</sup></u>
<b>All Persons</b>	<b>620</b>	<b>9.3</b>	<b>437</b>	<b>6.5</b>	<b>183</b>	<b>2.9</b>
<1	2	— <sup>3</sup>	0	0.0	2	— <sup>3</sup>
1-14	7	0.6	2	— <sup>3</sup>	5	0.5
15-24	113	12.6	43	4.8	70	7.8
25-44	234	12.8	158	8.7	76	4.2
45-64	212	12.6	189	11.3	23	1.4
65-74	29	7.1	23	5.6	6	1.5
75-84	15	4.9	15	4.9	0	0.0
85+	8	5.8	7	5.1	1	— <sup>3</sup>
<b>All Females</b>	<b>163</b>	<b>4.7</b>	<b>125</b>	<b>3.5</b>	<b>38</b>	<b>1.2</b>
<1	1	— <sup>3</sup>	0	0.0	1	— <sup>3</sup>
1-14	2	— <sup>3</sup>	0	0.0	2	— <sup>3</sup>
15-24	16	3.6	8	1.8	8	1.8
25-44	56	6.1	40	4.4	16	1.7
45-64	68	7.8	61	7.0	7	0.8
65-74	10	4.5	7	3.1	3	— <sup>3</sup>
75-84	6	3.2	6	3.2	0	0.0
85+	4	— <sup>3</sup>	3	— <sup>3</sup>	1	— <sup>3</sup>
<b>All Males</b>	<b>457</b>	<b>14.2</b>	<b>312</b>	<b>9.6</b>	<b>145</b>	<b>4.6</b>
<1	1	— <sup>3</sup>	0	0.0	1	— <sup>3</sup>
1-14	5	0.9	2	— <sup>3</sup>	3	— <sup>3</sup>
15-24	97	21.6	35	7.8	62	13.8
25-44	178	19.7	118	13.1	60	6.6
45-64	144	17.8	128	15.8	16	2.0
65-74	19	10.2	16	8.6	3	— <sup>3</sup>
75-84	9	7.4	9	7.4	0	0.0
85+	4	— <sup>3</sup>	4	— <sup>3</sup>	0	0.0

1. Data presented in this table are classified according to ICD-10. Please see Section Definitions for a list of ICD-10 codes used in this table. 2. Number of deaths per 100,000 persons in each age group; rates for all rows except the age group rows are age-adjusted to the 2000 US standard population. 3. Calculations based on values 1-4 are excluded.



**Table C-26. Intentional Injury Deaths<sup>1</sup> by Gender and Race and Hispanic Ethnicity:  
Numbers and Age-Adjusted Rates, Massachusetts: 2006**

	All Intentional		Suicide		Homicide	
	<u>Number</u>	<u>Rate<sup>2</sup></u>	<u>Number</u>	<u>Rate<sup>2</sup></u>	<u>Number</u>	<u>Rate<sup>2</sup></u>
White non-Hispanic	461	8.4	395	7.1	66	1.3
Females	137	4.8	113	3.9	24	1.0
Males	324	12.3	282	10.6	42	1.7
Black non-Hispanic	96	22.2	15	4.0	81	18.2
Females	14	6.8	4	-- <sup>3</sup>	10	4.8
Males	82	38.2	11	6.4	71	31.9
Asian non-Hispanic	18	5.4	14	4.3	4	-- <sup>3</sup>
Females	8	4.9	7	4.3	1	-- <sup>3</sup>
Males	10	5.9	7	4.2	3	-- <sup>3</sup>
Hispanic	42	7.8	12	2.3	30	5.5
Females	3	-- <sup>3</sup>	1	-- <sup>3</sup>	2	-- <sup>3</sup>
Males	39	13.7	11	3.9	28	9.8

1. Data presented in this table are classified according to ICD-10. Please see Section Definitions for a list of ICD-10 codes used in this table. 2. Number of deaths per 100,000 persons in each group; rates are age-adjusted to the 2000 US standard population. 3. Calculations based on values 1-4 are excluded.

Table C-27. Type of Injury<sup>1</sup> Deaths by Method and Intent Categories: Numbers and Age-Adjusted Rates<sup>2</sup>, Massachusetts: 2006

Method	All Injury Deaths													
	Unintentional						Intentional							
	"Accidents"			Suicide			Homicide			Undetermined				
	Total		Rate	Total		Rate	Total		Rate	Total		Rate	Total	
	Total Number	Rate	Total Number	Rate	Total Number	Rate	Total Number	Rate	Total Number	Rate	Total Number	Rate	Total Number	Rate
Poisoning	989	14.9	821	12.4	114	1.7	0	0.0	54	0.8	0	0.0	0	0.0
Transport Injuries	493	7.4	493	7.4	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Motor vehicle-related	475	7.1	475	7.1	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Injury to pedestrian	74	1.1	74	1.1	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Injury to pedal cyclist	4	-- <sup>4</sup>	4	-- <sup>4</sup>	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Injury to motorcyclist	55	0.8	55	0.8	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Injury to occupant	95	1.4	95	1.4	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Other and unspecified	247	3.7	247	3.7	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Other transport	18	0.3	18	0.3	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Hanging, strangulation or suffocation	285	4.2	109	1.5	166	2.5	9	0.1	1	-- <sup>4</sup>	0	0.0	0	0.0
Falls	424	5.6	406	5.4	16	0.2	0	0.0	2	-- <sup>4</sup>	0	0.0	0	0.0
Firearm	207	3.2	1	-- <sup>4</sup>	98	1.4	105	1.7	0	0.0	3	-- <sup>4</sup>	0	0.0
Drowning and submersion	67	1.1	45	0.7	13	0.2	0	0.0	9	0.1	0	0.0	0	0.0
Cut or pierce	56	0.8	2	-- <sup>4</sup>	13	0.2	40	0.6	1	-- <sup>4</sup>	0	0.0	0	0.0
Smoke, fire and flames	34	0.5	30	0.4	2	-- <sup>4</sup>	1	-- <sup>4</sup>	1	-- <sup>4</sup>	0	0.0	0	0.0
Other and unspecified	318	4.3	263	3.5	15	0.2	28	0.4	12	0.2	0	0.0	0	0.0
Adverse Effects	37	0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ALL INJURIES	2,910	42.5	2,170	31.4	437	6.5	183	2.9	80	1.2	3	-- <sup>4</sup>		

1. Data presented in this table are classified according to ICD-10. Please refer to Section Definitions for list of ICD-10 codes used in this table. 2. Number of deaths per 100,000; rates are adjusted to the 2000 US standard population. 3. Includes legal intervention and operations of war. 4. Calculations based on values 1-4 are excluded.

Table C-28. Poisoning Deaths by Intent and Leading Agents, Massachusetts<sup>1</sup>: 2000 and 2006

Poisoning Deaths – All Intents	2000 (N=586)		2006 (N=989)	
	Deaths Associated by Agent/Class of Agent <sup>2</sup>		Deaths Associated by Agent/Class of Agent <sup>2</sup>	
Leading Agent / Class of Agents	Number <sup>2</sup>	% <sup>3</sup>	Number <sup>2</sup>	% <sup>3</sup>
Opioids	363	61.9%	637	64.4%
Cocaine	171	29.2%	311	31.4%
Tricyclic & tetracyclic antidepressants, Monoamine-oxidase-inhibitor antidepressants, & Other & unspecified antidepressants	46	7.8%	156	15.8%
Other & unspecified drugs, medicaments & biological substances	63	10.8%	109	11.0%
Benzodiazepines	17	2.9%	84	8.5%
Phenothiazine antipsychotics & neuroleptics, Butyrophenone & thioxanthene neuroleptics, Other & unspecified antipsychotics & neuroleptics	6	1.0%	53	5.4%
Toxic effect of alcohol	18	3.1%	50	5.1%
Poisoning by antiepileptic, sedative-hypnotic & antiparkinsonism drugs	7	1.2%	25	2.5%
Toxic effect of carbon monoxide	28	4.8%	25	2.5%
All other agents combined	45	7.7%	121	12.2%

Unintentional/Undetermined Intent Poisoning Deaths <sup>4</sup>	2000 (N=485)		2006 (N=875)	
	Deaths Associated by Agent/Class of Agent <sup>2</sup>		Deaths Associated by Agent/Class of Agent <sup>2</sup>	
Leading Agent / Class of Agents	Number <sup>2</sup>	% <sup>3</sup>	Number <sup>2</sup>	% <sup>3</sup>
Opioids	338	69.7%	615	70.3%
Cocaine	167	34.4%	303	34.6%
Tricyclic & tetracyclic antidepressants, Monoamine-oxidase-inhibitor antidepressants, & Other & unspecified antidepressants	19	3.9%	116	13.3%
Other & unspecified drugs, medicaments & biological substances	40	8.2%	81	9.3%
Benzodiazepines	11	2.3%	70	8.0%
Toxic effect of alcohol	17	3.5%	45	5.1%
Phenothiazine antipsychotics & neuroleptics, Butyrophenone & thioxanthene neuroleptics, Other & unspecified antipsychotics & neuroleptics	1	0.2%	38	4.3%
Poisoning by antiepileptic, sedative-hypnotic & antiparkinsonism drugs	2	0.4%	15	1.7%
Toxic effect of carbon monoxide	6	1.2%	7	0.8%
All other agents combined	30	6.2%	86	9.8%

Table C-28(continued). Poisoning Deaths by Intent and Leading Agents, Massachusetts<sup>1</sup>: 2000 and 2006

Suicide Poisoning Deaths	2000 (N=101)		2006 (N=114)	
	Deaths Associated by Agent/Class of Agent			
Leading Agent / Class of Agents	Number <sup>2</sup>	% <sup>3</sup>	Number <sup>2</sup>	% <sup>3</sup>
Tricyclic & tetracyclic antidepressants, Monoamine-oxidase-inhibitor antidepressants, & Other & unspecified antidepressants	27	26.7%	40	35.1%
Other & unspecified drugs, medicaments & biological substances	23	22.8%	28	24.6%
Opioids	25	24.8%	22	19.3%
Toxic effect of carbon monoxide	22	21.8%	18	15.8%
Phenothiazine antipsychotics & neuroleptics, Butyrophenone & thioxanthene neuroleptics, Other & unspecified antipsychotics & neuroleptics	5	5.0%	15	13.2%
Benzodiazepines	6	5.9%	14	12.3%
Poisoning by antiepileptic, sedative-hypnotic & antiparkinsonism drugs	5	5.0%	10	8.8%
Cocaine	4	4.0%	8	7.0%
Toxic effect of alcohol	1	1.0%	5	4.4%
All other agents combined	15	14.9%	35	30.7%

<sup>1</sup> Leading Agents/Class of Agents are sorted in descending order by their count in 2006. See the Appendix for a list of specific ICD10 codes used.

<sup>2</sup> The sum of the number of deaths associated with agents or class of agents is greater than the number of deaths because some deaths involve multiple agents or classes of agents.

<sup>3</sup> The sum of the percentage of deaths associated with agents or class of agents is greater than the number of deaths because some deaths involve multiple agents or classes of agents.

<sup>4</sup> There was a policy change at the MA Office of the Chief Medical Examiner in 2005, which impacted the classification of poisoning deaths. In order to allow consistent comparisons and interpretation of historical trends, unintentional poisoning deaths and poisoning deaths of undetermined intent have been combined into one category, which is comparable to the sum of the categories from previous years. Suicide-associated poisoning deaths were not affected by the policy change.



**Table C-29. HIV/AIDS<sup>1</sup> Deaths by Gender, Race and Hispanic Ethnicity: Numbers, Percent and Age-adjusted Rates, Massachusetts: 2000-2006**

<u>TOTAL</u>	<u>White non-Hispanic<sup>2</sup></u>			<u>Black non-Hispanic<sup>2</sup></u>			<u>Hispanic</u>		
Year	#	Percent	Rate <sup>3</sup>	#	Percent	Rate <sup>3</sup>	#	Percent	Rate <sup>3</sup>
2000	104	46%	1.9	61	27%	18.3	59	26%	17.4
2001	125	50%	2.2	73	29%	21.1	51	20%	13.5
2002	108	47%	1.9	68	30%	20.3	52	23%	13.5
2003	113	50%	2.0	58	26%	17.2	53	23%	14.9
2004	97	46%	1.7	55	26%	15.8	55	26%	13.9
2005	75	42%	1.3	56	31%	16.0	45	25%	11.5
2006	91	51%	1.6	49	27%	13.7	37	21%	8.4
<b><u>MALE</u></b>									
2000	77	48%	2.8	40	25%	26.0	42	26%	27.7
2001	92	51%	3.3	50	27%	31.4	40	22%	22.5
2002	86	53%	3.1	43	26%	27.9	34	21%	18.7
2003	74	49%	2.7	36	24%	23.4	39	26%	23.8
2004	74	49%	2.7	39	26%	24.0	34	23%	18.4
2005	52	43%	1.9	34	28%	20.9	33	27%	18.4
2006	67	55%	2.4	33	27%	20.0	21	17%	9.8
<b><u>FEMALE</u></b>									
2000	27	42%	1.0	21	32%	11.4	17	26%	8.6
2001	33	49%	1.2	23	34%	12.1	11	16%	5.4
2002	22	33%	0.8	25	38%	13.8	18	27%	8.7
2003	39	51%	1.4	22	29%	12.0	14	18%	7.1
2004	23	38%	0.8	16	27%	8.7	21	35%	10.0
2005	23	40%	0.8	22	38%	11.8	12	21%	5.4
2006	24	42%	0.9	16	28%	8.3	16	28%	7.1

1. AIDS and HIV disease deaths coded using ICD-10: B20-B24. 2. Race and ethnicity data in this table are presented as mutually exclusive categories. Persons of Hispanic ethnicity are not included in a race category. 3. Number of deaths per 100,000 persons; rates are age-adjusted to the 2000 U.S. standard population. Resident death rates for 2000-2005 are calculated using the Massachusetts (Department of Public Health) Modified Age, Race/Ethnicity, & Sex Estimates 2000-2005 (MMARS00-05), released October 2006. Data for 2006 use the NCHS population estimates for 2006 by age, sex, race, and Hispanic origin.

Table C-30. HIV/AIDS<sup>1</sup> Deaths by Age, Massachusetts: 1994-2006

Year	Age (in years)											
	<15			15-24			25-34			35-44		
	Comparability Unmodified	Comparability Modified <sup>2</sup>	Comparability Unmodified	Comparability Unmodified	Comparability Modified <sup>2</sup>	Comparability Unmodified	Comparability Unmodified	Comparability Modified <sup>2</sup>	Comparability Unmodified	Comparability Modified <sup>2</sup>	Comparability Unmodified	Comparability Modified <sup>2</sup>
1994	#	7	7	8	9	272	289	464	494	187	199	
	%	0.7	0.7	0.9	0.9	29.0	29.0	49.5	49.5	19.9	19.9	
1995	#	11	12	5	5	272	289	443	471	206	219	
	%	1.2	1.2	0.5	0.5	29.0	29.0	47.3	47.2	22.0	22.0	
1996	#	4	4	8	9	154	164	300	319	143	152	
	%	0.7	0.6	1.3	1.4	25.3	25.3	49.3	49.2	23.5	23.5	
1997	#	5	6	1	1	35	40	135	155	66	76	
	%	2.1	2.2	0.4	0.4	14.5	14.4	55.8	56.0	27.3	27.4	
1998	#	0	0	0	0	47	54	106	121	60	69	
	%	0.0	0.0	0.0	0.0	22.1	22.1	49.8	50.0	28.2	28.3	
1999	#	2 <sup>3</sup>	3 <sup>4</sup>	9 <sup>3</sup>	34 <sup>3</sup>	112 <sup>3</sup>	85 <sup>3</sup>	112 <sup>3</sup>	112 <sup>3</sup>	35.1	35.1	
	%	0.4	0.4	3.7	14.0	46.3	46.3	46.3	46.3	40.7 <sup>3</sup>	40.7 <sup>3</sup>	
2000	#	4 <sup>3</sup>	0 <sup>3</sup>	0 <sup>3</sup>	26 <sup>3</sup>	104 <sup>3</sup>	92 <sup>3</sup>	104 <sup>3</sup>	104 <sup>3</sup>	92 <sup>3</sup>	92 <sup>3</sup>	
	%	0.4	0.0	0.0	11.5 <sup>3</sup>	46.0 <sup>3</sup>	40.7 <sup>3</sup>	46.0 <sup>3</sup>	46.0 <sup>3</sup>	40.7 <sup>3</sup>	40.7 <sup>3</sup>	
2001	#	1 <sup>3</sup>	2 <sup>3</sup>	2 <sup>3</sup>	25 <sup>3</sup>	111 <sup>3</sup>	110 <sup>3</sup>	111 <sup>3</sup>	111 <sup>3</sup>	110 <sup>3</sup>	110 <sup>3</sup>	
	%	0.4	0.4	0.4	10.0	44.6	44.2 <sup>3</sup>	44.6	44.6	44.2 <sup>3</sup>	44.2 <sup>3</sup>	
2002	#	1 <sup>4</sup>	1 <sup>4</sup>	1 <sup>4</sup>	10 <sup>3</sup>	91 <sup>3</sup>	126 <sup>3</sup>	91 <sup>3</sup>	91 <sup>3</sup>	126 <sup>3</sup>	126 <sup>3</sup>	
	%	0.4	0.4	0.4	4.4	39.7	55.0 <sup>3</sup>	39.7	39.7	55.0 <sup>3</sup>	55.0 <sup>3</sup>	
2003	#	1 <sup>3</sup>	1 <sup>3</sup>	3 <sup>3</sup>	14 <sup>3</sup>	94 <sup>3</sup>	114 <sup>3</sup>	94 <sup>3</sup>	94 <sup>3</sup>	114 <sup>3</sup>	114 <sup>3</sup>	
	%	0.4	0.4	0.4	6.2	41.6	50.4	41.6	41.6	50.4	50.4	
2004	#	0 <sup>4</sup>	0 <sup>4</sup>	2 <sup>3</sup>	9 <sup>3</sup>	79 <sup>3</sup>	121 <sup>3</sup>	79 <sup>3</sup>	79 <sup>3</sup>	121 <sup>3</sup>	121 <sup>3</sup>	
	%	0.0	0.0	0.4	4.3	37.4	57.4	37.4	37.4	57.4	57.4	
2005	#	0 <sup>3</sup>	0 <sup>3</sup>	1 <sup>3</sup>	6 <sup>3</sup>	64 <sup>3</sup>	109 <sup>3</sup>	64 <sup>3</sup>	64 <sup>3</sup>	109 <sup>3</sup>	109 <sup>3</sup>	
	%	0.0	0.0	0.4	3.3	35.6	60.6	35.6	35.6	60.6	60.6	
2006	#	0 <sup>3</sup>	0 <sup>3</sup>	1 <sup>3</sup>	6 <sup>3</sup>	71 <sup>3</sup>	101 <sup>3</sup>	71 <sup>3</sup>	71 <sup>3</sup>	101 <sup>3</sup>	101 <sup>3</sup>	
	%	0.0	0.0	0.4	3.4	39.7	56.4	39.7	39.7	56.4	56.4	

\*\*PLEASE NOTE: this table has been updated June 2001 to reflect the revised comparability ratio of HIV Disease Deaths, issued by the National Center for Health Statistics. 1. AIDS: Acquired Immune Deficiency Syndrome, HIV. The deaths reported are cases for which AIDS or HIV-related disease was the underlying cause of death. Deaths for 1992-1998 were coded according to the ICD-9 classification schedule, which began with 1987 death data (codes 042-044). Deaths for 1999-2006 were coded according to the ICD-10 (codes B20-B24). 2. Comparability Modified (CM): this number has been adjusted using the preliminary comparability ratio (CR) from NCHS (revised June 2001). CM data for 1994-1996 use 1996 based CR; CM data for 1997-1998 use revised 1998 based CR. 3. When comparing data over time after 1994, please use the comparability modified number for years 1994-1998. 4. Calculations based on values 1-4 are excluded.

**Table C-31. HIV/AIDS<sup>1</sup> Deaths by Gender, Race and Hispanic Ethnicity, Massachusetts: 1994-2006**

Year	Gender			Race and Ethnicity							
	Male		Female	White non-Hispanic <sup>2</sup>				Black non-Hispanic <sup>2</sup>			
	Comparability Unmodified	Comparability Modified <sup>4</sup>		Comparability Unmodified	Comparability Modified <sup>4</sup>	Comparability Unmodified	Comparability Modified <sup>4</sup>	Comparability Unmodified	Comparability Modified <sup>4</sup>	Comparability Unmodified	Comparability Modified <sup>4</sup>
1994	#	763	812	175	186	581	618	193	205	7	7
	%	81.3	81.4	18.7	18.6	61.9	61.9	20.6	20.5	0.7	0.7
1995	#	753	801	184	196	554	589	223	237	5	5
	%	80.4	80.3	19.6	19.7	59.1	59.1	23.8	23.8	0.5	0.5
1996	#	494	525	115	122	341	363	161	171	5	5
	%	81.1	81.0	18.9	18.8	56.0	56.0	26.4	26.4	0.8	0.8
1997	#	190	218	52	60	121	139	74	85	0	0
	%	78.5	78.7	21.5	21.7	50.0	50.2	30.6	30.7	0	0
1998	#	169	193	44	50	104	119	51	58	0	0
	%	79.3	79.1	20.7	20.5	48.8	48.8	23.9	23.8	0	0
1999	#	177 <sup>6</sup>	65 <sup>6</sup>	26.9	65 <sup>6</sup>	126 <sup>6</sup>	126 <sup>6</sup>	51 <sup>6</sup>	51 <sup>6</sup>	2 <sup>6</sup>	2 <sup>6</sup>
	%	73.1	26.9	65 <sup>6</sup>	26.9	52.1	52.1	21.1	21.1	0	0
2000	#	161 <sup>6</sup>	65 <sup>6</sup>	28.8	65 <sup>6</sup>	104 <sup>6</sup>	104 <sup>6</sup>	61 <sup>6</sup>	61 <sup>6</sup>	2 <sup>6</sup>	2 <sup>6</sup>
	%	71.2	28.8	65 <sup>6</sup>	28.8	46.0	46.0	27.0	27.0	0	0
2001	#	182 <sup>6</sup>	67 <sup>6</sup>	26.9	67 <sup>6</sup>	125 <sup>6</sup>	125 <sup>6</sup>	73 <sup>6</sup>	73 <sup>6</sup>	0 <sup>6</sup>	0 <sup>6</sup>
	%	73.1	26.9	66 <sup>6</sup>	66 <sup>6</sup>	50.2	50.2	29.3	29.3	0	0
2002	#	163 <sup>6</sup>	28.8	28.8	66 <sup>6</sup>	108 <sup>6</sup>	108 <sup>6</sup>	68 <sup>6</sup>	68 <sup>6</sup>	1 <sup>6</sup>	1 <sup>6</sup>
	%	71.2	28.8	28.8	28.8	47.1	47.1	29.7	29.7	0	0
2003	#	150 <sup>6</sup>	76 <sup>6</sup>	33.6	76 <sup>6</sup>	113 <sup>6</sup>	113 <sup>6</sup>	58 <sup>6</sup>	58 <sup>6</sup>	2 <sup>6</sup>	2 <sup>6</sup>
	%	66.4	33.6	60 <sup>6</sup>	60 <sup>6</sup>	50.0	50.0	25.7	25.7	0	0
2004	#	151 <sup>6</sup>	28.4	28.4	60 <sup>6</sup>	97 <sup>6</sup>	97 <sup>6</sup>	55 <sup>6</sup>	55 <sup>6</sup>	4 <sup>6</sup>	4 <sup>6</sup>
	%	71.6	28.4	28.4	28.4	46.0	46.0	26.1	26.1	0	0
2005	#	122 <sup>6</sup>	58 <sup>6</sup>	32.2	58 <sup>6</sup>	75 <sup>6</sup>	75 <sup>6</sup>	56 <sup>6</sup>	56 <sup>6</sup>	4 <sup>6</sup>	4 <sup>6</sup>
	%	67.8	32.2	32.2	32.2	41.7	41.7	31.1	31.1	0	0
2006	#	122 <sup>6</sup>	57 <sup>6</sup>	31.8	57 <sup>6</sup>	91 <sup>6</sup>	91 <sup>6</sup>	49 <sup>6</sup>	49 <sup>6</sup>	2 <sup>6</sup>	2 <sup>6</sup>
	%	68.2	31.8	31.8	31.8	50.8	50.8	27.4	27.4	0	0

**\*\*PLEASE NOTE:** This table was updated in June 2001 to reflect the revised comparability ratio of HIV Disease Deaths, issued by the National Center for Health Statistics. 1. AIDS: Acquired Immune Deficiency Syndrome, HIV: Human Immunodeficiency Virus. The deaths reported are cases for which AIDS or HIV-related disease was the underlying cause of death. Deaths for 1992-1998 were coded according to the ICD-9 classification schedule, which began with 1987 death data (codes 042-044). Deaths for 1999-2006 were coded according to the ICD-10 (codes B20-B24). 2. Race and ethnicity data in this table are presented as mutually exclusive categories. Persons of Hispanic ethnicity are not included in a race category. 3. The "Other" category represents Asian non-Hispanics, American Indian non-Hispanics, and other non-Hispanics. 4. Comparability Modified: this number has been adjusted using the preliminary comparability ratio (CR) from NCHS (June 2001). CM data for 1994-1996 use 1996 based CR; CM data for 1997-1998 use revised 1998 based CR. 5. Calculations based on values 1-4 are excluded. 6. When comparing data over time after 1994, please use the comparability modified number for years 1994-1998.

Table C-32A. Medical Examiner Certified Deaths by Cause <sup>1</sup> , Race, Sex, and Age, Massachusetts Occurrence: 2006										
Total Deaths										
Age	Race/Sex	Medical Examiner	Motor Vehicle Injuries	Suicide	Homicide	Legal Intervention	Injury of Undetermined Intent	All Other Injuries	Non-Violent Causes	Ill Defined & Unknown Causes
Total	White M	2891	281	283	50	3	39	799	1345	91
	F	1484	126	115	26	0	30	466	653	68
	Black M	289	26	11	72	0	5	53	107	15
	F	107	7	4	7	0	3	26	52	8
	Other M	226	27	14	30	1	2	63	79	10
	F	93	8	9	5	0	2	19	41	9
<1	White M	23	0	0	1	0	0	4	6	12
	F	20	0	0	1	0	0	1	8	10
	Black M	10	0	0	0	0	0	1	4	5
	F	7	0	0	0	0	0	1	1	5
	Other M	8	0	0	0	0	0	1	3	4
	F	6	0	0	0	0	0	0	1	5
1-14	White M	21	6	2	2	0	0	5	5	1
	F	18	2	1	4	0	1	3	4	3
	Black M	6	1	0	0	0	0	3	1	1
	F	3	1	0	0	0	0	1	1	0
	Other M	8	1	0	1	0	0	2	4	0
	F	6	0	0	0	0	0	1	5	0
15-19	White M	56	21	7	4	1	0	13	9	1
	F	32	18	3	3	0	0	6	2	0
	Black M	26	5	0	14	0	2	3	2	0
	F	3	1	0	1	0	0	0	1	0
	Other M	9	3	0	4	0	0	1	1	0
	F	2	0	0	1	0	0	0	0	1
20-29	White M	292	66	38	13	1	3	125	35	11
	F	94	21	13	4	0	0	32	18	6
	Black M	61	10	2	37	0	0	6	6	0
	F	12	0	1	1	0	0	2	7	1
	Other M	54	16	6	15	0	0	10	4	3
	F	10	3	3	1	0	0	3	0	0



Table C-32A (continued). Medical Examiner Certified Deaths by Cause<sup>1</sup>, Race, Sex, and Age, Massachusetts Occurrence: 2006

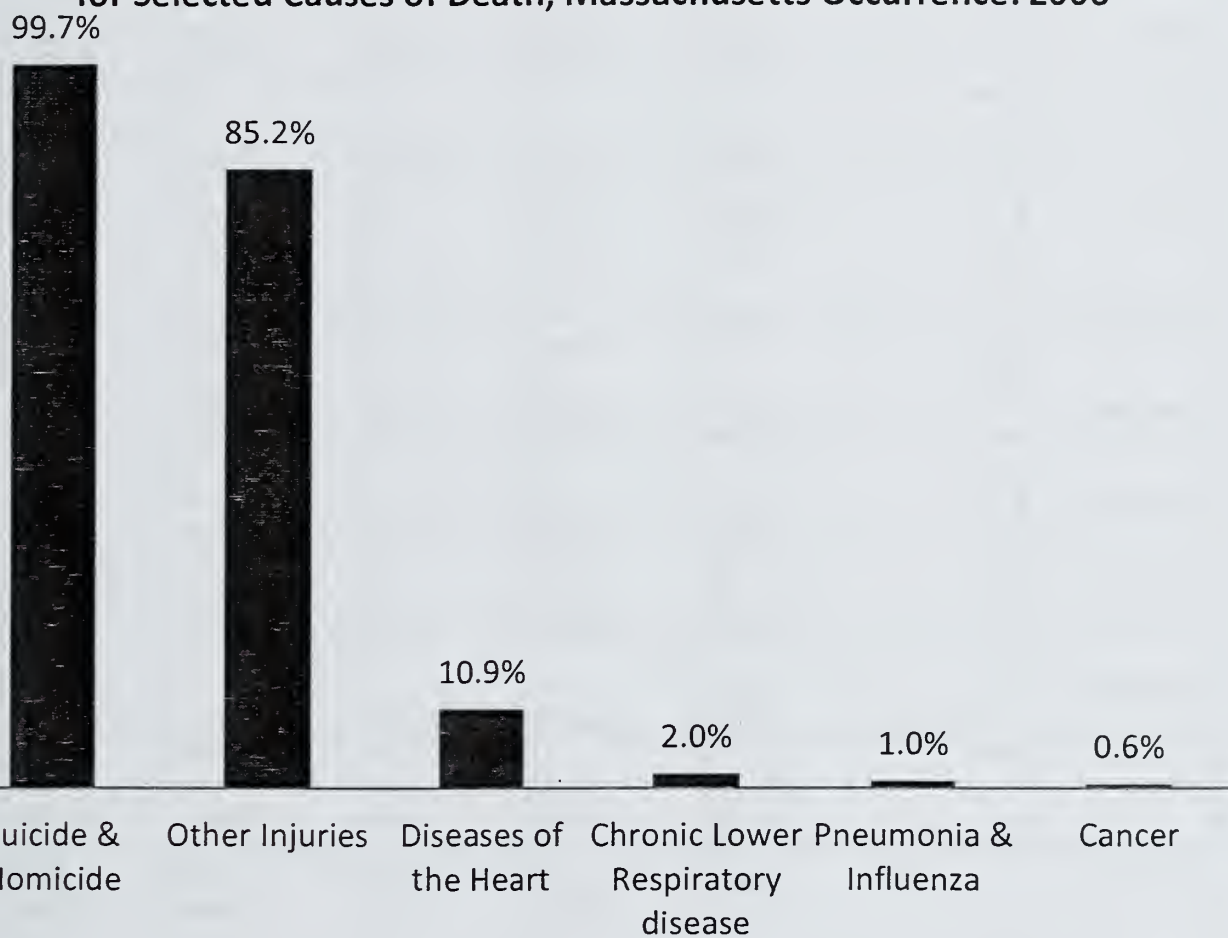
Total Deaths		Age	Race/Sex	Certified by Medical Examiner	Motor Vehicle		Suicide	Homicide	Legal Intervention	Injury of		All Other Injuries	Non-Violent Causes	III Defined & Unknown Causes
					Injuries	Injuries				Undetermined Intent	Intentional			
30-39	White M	304		33	46	10			0	6		127	70	12
	F	101		5	20	5			0	4		42	22	3
	Black M	38		3	3	14			0	0		5	10	3
	F	11		0	1	2			0	1		4	2	1
40-49	Other M	46		3	3	7			1	0		20	11	1
	F	15		2	1	1			0	1		0	9	1
	White M	669		38	87	12			1	9		221	281	20
	F	247		13	27	5			0	10		93	88	11
50-59	Black M	44		3	4	4			0	2		17	12	2
	F	26		1	1	2			0	1		8	12	1
	Other M	38		1	3	0			0	1		19	14	0
	F	17		2	1	1			0	1		6	5	1
60-69	White M	694		54	65	5			0	14		118	420	18
	F	250		22	29	1			0	8		65	108	17
	Black M	49		2	1	1			0	1		13	29	2
	F	18		2	1	1			0	0		6	8	0
70-79	Other M	30		0	1	1			0	0		5	22	1
	F	10		0	3	0			0	0		4	3	0
	White M	330		30	18	2			0	3		34	233	10
	F	172		8	13	1			0	3		21	118	8
70-79	Black M	30		2	0	1			0	0		2	24	1
	F	5		0	0	0			0	0		1	4	0
	Other M	19		2	1	2			0	1		1	11	1
	F	4		0	0	1			0	0		1	2	0
70-79	White M	245		15	12	1			0	4		53	156	4
	F	187		21	2	1			0	2		49	108	4
	Black M	14		0	1	1			0	0		1	10	1
	F	11		2	0	0			0	1		1	7	0
70-79	Other M	6		0	0	0			0	0		1	5	0
	F	8		0	1	0			0	0		1	6	0

Table C-32A (continued). Medical Examiner Certified Deaths by Cause <sup>1</sup> , Race, Sex, and Age, Massachusetts Occurrence: 2006												
Age	Race/Sex	Total Deaths		Motor Vehicle Injuries	Suicide	Homicide	Intervention	Injury of		All Other Injuries	Non-Violent Causes	Ill Defined & Unknown Causes
		Certified by Medical Examiner	Legal Undetermined Intent									
80+	White M	257	0	18	8	0	0	0	0	99	130	2
	F	363	0	16	7	1	0	2	154	177	6	6
	Black M	11	0	0	0	0	0	0	2	9	0	0
	F	11	0	0	0	0	0	0	2	9	0	0
	Other M	8	1	1	0	0	0	0	3	4	0	0
	F	15	1	1	0	0	0	0	3	10	1	1

Note: 2 decedents have not been included in this table due to missing demographic information.

1. Cause of Death classified according to ICD-10. See section definitions for a list of ICD codes.

**Figure C-7. Proportion of Deaths Certified by Medical Examiner  
for Selected Causes of Death, Massachusetts Occurrence: 2006**



**Table C-32B. Medical Examiner Certified Deaths by County,  
Massachusetts Occurrence: 2006**

County		Population	Occurrence Deaths	M.E. Certified	Referred-Not Certified by M.E.	Natural Cause Deaths Certified by M.E.
Total	#	6,437,123	54,176	5,090	8,581	2,478
	%	100.00%	100.00%	9.40%	15.84%	48.68%
Barnstable	#	224,816	2,527	239	337	120
	%	3.49%	4.66%	9.46%	13.34%	50.21%
	Rank	9	9	9	9	9
Berkshire	#	131,117	1,508	117	273	51
	%	2.04%	2.78%	7.76%	18.10%	43.59%
	Rank	11	10	10	10	10
Bristol	#	545,379	4,464	463	675	231
	%	8.47%	8.24%	10.37%	15.12%	49.89%
	Rank	6	7	5	7	6
Dukes	#	15,515	115	24	13	14
	%	0.24%	0.21%	20.87%	11.30%	58.33%
	Rank	13	13	13	13	13
Essex	#	735,958	5,980	489	753	249
	%	11.43%	11.04%	8.18%	12.59%	50.92%
	Rank	3	4	4	5	4
Franklin	#	72,183	478	42	72	19
	%	1.12%	0.88%	8.79%	15.06%	45.24%
	Rank	12	12	12	12	12
Hampden	#	460,520	4,743	334	842	144
	%	7.15%	8.75%	7.04%	17.75%	43.11%
	Rank	8	6	8	4	8
Hampshire	#	153,471	1,039	70	194	39
	%	2.38%	1.92%	6.74%	18.67%	55.71%
	Rank	10	11	11	11	11
Middlesex	#	1,467,016	10,337	862	1,590	443
	%	22.79%	19.08%	8.34%	15.38%	51.39%
	Rank	1	1	2	1	2
Nantucket	#	10,240	51	6	2	3
	%	0.16%	0.09%	11.76%	3.92%	50.00%
	Rank	14	14	14	14	14
Norfolk	#	654,753	4,925	416	684	240
	%	10.17%	9.09%	8.45%	13.89%	57.69%
	Rank	5	5	6	6	5
Plymouth	#	493,623	3,550	354	566	193
	%	7.67%	6.55%	9.97%	15.94%	54.52%
	Rank	7	8	7	8	7
Suffolk	#	687,610	7,753	1,059	1,492	461
	%	10.68%	14.31%	13.66%	19.24%	43.53%
	Rank	4	2	1	2	1
Worcester	#	784,922	6,706	615	1,088	271
	%	12.19%	12.38%	9.17%	16.22%	44.07%
	Rank	2	3	3	3	3

NOTE: The percentages in the Medical Examiner Certified Deaths column and the Referred column are based on totals in the Occurrence Deaths column. The percentages and ranks of natural cause of death are based on total number of medical examiner certified deaths for each county. Total population based on sum of county estimates. This table does not include 1 death of unknown county of occurrence.



Table C-33A. Selected Causes of Death by Community, Massachusetts: 2006

CITY/TOWN	Total Deaths	Age-Adjusted Death Rate <sup>1</sup>	Heart Disease	Total Cancer	Lung Cancer	Female Breast Cancer <sup>2</sup>	Stroke	CLRD <sup>3</sup>	Diabetes	Influenza & Pneumonia	Motor Vehicle	Homicide	Suicide	All Narcotics, Psychodysleptics, hallucinogens <sup>6</sup>
Massachusetts	53,293	717.6	12,891	13,375	3,717	962	2,868	2,529	1,127	1,748	475	183	437	628
Abington	133	732.3	31	29	5	5	8	7	3	3	0	0	0	3
Acton	116	774.1	20	33	7	5	8	2	1	5	0	0	1	0
Acushnet	77	634.9	22	19	4	1	4	8	1	3	3	1	0	0
Adams	106	769.5	31	20	5	1	3	4	2	7	1	0	0	0
Agawam	328	727.6	60	90	22	9	14	18	9	10	0	0	4	3
Alford	3	-- <sup>4</sup>	1	1	0	0	0	0	0	0	0	0	0	0
Amesbury	126	697.1	21	37	10	4	6	4	8	5	1	0	2	3
Amherst	122	570.0	27	30	5	3	12	3	4	3	2	0	1	0
Andover	240	649.1	68	57	7	8	13	8	2	7	1	0	4	1
Aquinnah	4	-- <sup>4</sup>	3	1	1	0	0	0	0	0	0	0	0	0
Arlington	389	629.2	86	101	25	8	20	9	3	8	2	0	5	5
Ashburnham	34	798.8	9	13	2	0	1	1	0	0	0	0	1	1
Ashby	19	889.7	2	4	0	1	1	0	0	1	1	0	0	0
Ashfield	8	394.5	1	5	2	0	1	0	0	0	0	0	0	0
Ashland	99	857.8	24	37	8	3	6	4	2	4	1	0	1	1
Athol	133	761.9	43	34	11	1	8	3	1	5	0	0	1	0
Attleboro	382	811.1	99	91	27	4	16	19	7	15	6	1	3	2
Auburn	166	694.6	45	48	10	5	3	13	1	3	0	0	0	1
Avon	43	803.5	10	10	4	0	3	4	0	1	0	0	1	2
Ayer	62	818.2	7	17	5	3	4	2	1	2	2	0	1	1
Barnstable	485	636.5	89	143	43	13	20	31	14	10	9	0	6	4
Barre	40	692.9	12	8	4	1	1	2	1	1	1	0	1	1
Becket	12	623.8	1	8	5	0	0	0	0	0	0	0	0	0
Bedford	128	588.7	27	28	11	4	9	5	4	5	2	0	0	1
Belchertown	74	667.3	21	17	7	1	4	1	3	2	2	0	1	0
Bellingham	106	881.3	21	33	7	3	6	7	2	1	2	0	1	1
Belmont	183	502.0	53	45	6	2	21	0	3	11	1	0	1	0
Berkley	28	751.5	8	3	0	0	1	2	1	2	3	0	0	1
Berlin	18	668.4	4	7	3	0	2	1	0	1	0	0	0	0
Barnardston	17	557.7	3	3	0	0	1	0	0	0	0	0	0	0
Beverly	393	711.6	94	99	33	4	26	20	6	16	1	0	5	4
Billerica	236	845.9	54	77	23	4	3	11	6	8	2	0	1	4
Blackstone	50	636.8	16	11	2	0	1	0	1	2	0	0	2	0
Blandford	5	563.2	2	3	0	0	0	0	0	0	0	0	0	0
Bolton	18	842.1	2	10	4	0	0	0	0	0	0	0	0	0
Boston	3,864	740.3	813	944	255	78	209	139	98	105	29	59	31	93

Table C-33A (continued). Selected Causes of Death by Community, Massachusetts: 2006

CITY/TOWN	Total Deaths	Age-Adjusted Death Rate <sup>1</sup>	Heart Disease	Total Cancer	Lung Cancer	Female Breast Cancer <sup>2</sup>	Stroke	CLRD <sup>3</sup>	Diabetes	Influenza & Pneumonia	Motor Vehicle	Homicide	Suicide	All Narcotics, Psychodysleptics, hallucinogens
Bourne	253	946.9	80	74	27	1	10	8	3	3	0	1	0	1
Boxborough	18	744.0	1	7	1	2	1	1	0	0	1	0	0	0
Boxford	50	784.9	15	16	3	4	2	1	2	1	1	1	1	0
Boylston	25	630.6	5	8	0	1	1	1	1	1	0	0	0	0
Braintree	336	657.8	85	84	33	3	18	17	10	10	0	1	6	4
Brewster	153	627.2	41	34	13	0	15	7	1	9	2	0	0	2
Bridgewater	143	751.6	46	33	7	4	10	6	1	7	1	0	4	0
Brimfield	42	1,150.1	16	10	4	1	1	4	0	0	2	0	0	0
Brockton	822	866.2	214	191	47	12	41	38	20	30	8	11	5	13
Brookfield	34	1,041.9	13	9	5	1	3	3	1	1	0	0	1	0
Brookline	324	479.5	75	84	20	6	15	9	8	15	1	1	3	2
Buckland	13	639.5	3	4	1	1	1	1	0	0	0	0	0	0
Burlington	177	800.0	33	53	16	5	9	9	1	4	2	0	3	0
Cambridge	549	647.6	125	134	28	9	32	23	15	25	3	3	9	7
Canton	200	602.6	37	57	13	2	11	11	3	6	1	0	1	2
Carlisle	16	608.0	1	5	2	0	1	0	0	1	1	0	0	0
Carver	109	818.7	32	36	12	0	3	1	0	4	5	0	1	1
Charlmont	11	787.5	3	3	1	1	1	0	0	1	0	0	1	0
Charlton	78	870.4	24	18	8	1	4	3	2	1	1	0	0	1
Chatham	103	482.8	26	30	5	4	7	5	3	4	0	0	0	0
Chelmsford	293	778.2	66	77	18	11	10	9	5	14	2	1	3	1
Chelsea	262	805.9	74	55	8	2	17	16	10	6	1	3	1	2
Cheshire	25	644.4	4	7	1	0	3	2	2	1	0	0	0	0
Chester	12	1,022.7	3	2	1	1	1	1	0	0	0	0	0	0
Chesterfield	6	476.2	1	2	1	1	0	0	0	0	0	0	0	0
Chicopee	610	820.0	169	157	56	11	28	36	15	22	2	1	7	6
Chilmark	9	571.7	1	2	0	0	0	0	0	0	0	0	0	0
Clarksburg	13	697.9	3	2	0	0	1	2	0	1	0	0	0	0
Clinton	115	664.8	18	29	8	1	5	5	5	5	4	0	1	5
Cohasset	61	667.1	11	22	7	1	3	2	1	3	0	0	0	0
Colrain	13	700.7	3	4	0	0	0	0	0	2	0	0	0	0
Concord	175	686.7	35	47	9	7	8	6	3	8	1	0	0	0
Conway	6	385.6	3	1	0	0	1	0	0	0	0	0	0	0
Cummington	5	516.0	1	1	0	0	0	0	0	2	0	0	0	0
Dalton	81	884.2	14	23	7	2	5	5	2	2	1	0	1	0
Danvers	306	789.6	77	64	18	1	16	15	4	18	0	1	1	5
Dartmouth	273	666.0	76	79	19	3	16	15	3	6	3	0	2	2

Table C-33A (continued). Selected Causes of Death by Community, Massachusetts: 2006

CITY/TOWN	Total Deaths	Age-Adjusted Death Rate <sup>1</sup>	Heart Disease	Total Cancer	Lung Cancer	Female Breast Cancer <sup>2</sup>	Stroke	CLRD <sup>3</sup>	Diabetes	Influenza & Pneumonia	Motor Vehicle	Homicide	Suicide	All Narcotics, Psychodysleptics, hallucinogens <sup>4</sup>
Dedham	242	727.1	73	50	11	8	18	16	3	5	0	0	1	5
Deerfield	47	846.0	9	11	0	2	2	5	1	1	1	0	0	0
Dennis	202	644.6	54	56	18	5	15	9	5	4	0	0	0	3
Dighton	48	661.5	12	14	6	0	3	2	0	4	2	0	0	0
Douglas	42	718.1	13	10	2	1	3	2	0	2	1	0	0	1
Dover	22	483.2	5	7	1	0	0	1	0	1	1	0	1	0
Dracut	219	876.2	55	67	20	8	11	11	3	7	1	1	1	3
Dudley	85	747.5	25	24	11	0	3	5	2	2	0	0	0	1
Dunstable	10	546.5	1	5	0	0	0	0	1	0	0	0	0	0
Duxbury	143	803.4	41	33	10	1	7	13	2	6	1	0	1	1
East Bridgewater	105	852.8	29	34	10	2	5	7	3	4	1	0	0	1
East Brookfield	16	653.8	2	5	2	0	1	2	0	0	1	0	1	1
East Longmeadow	187	756.8	50	32	3	4	10	10	1	4	3	0	0	1
Eastham	54	560.1	5	22	4	2	4	3	2	0	0	0	0	1
Easthampton	144	699.8	31	27	8	2	12	8	1	3	3	0	0	2
Easton	147	819.8	30	44	14	2	6	10	6	6	1	0	0	1
Edgartown	27	689.6	6	11	3	2	0	1	1	0	0	0	1	1
Egremont	11	566.9	4	3	1	1	0	0	1	0	0	0	0	0
Erving	11	594.4	1	5	1	0	0	1	0	0	0	0	0	0
Essex	19	513.3	3	6	1	1	1	0	1	0	0	0	0	0
Everett	330	743.7	80	84	25	6	16	15	9	5	1	0	3	5
Fairhaven	202	714.3	62	42	12	2	9	10	3	7	2	1	0	4
Fall River	1,030	823.3	288	225	57	14	58	46	29	32	10	1	9	19
Falmouth	393	654.7	95	104	26	4	25	29	7	4	2	1	2	4
Fitchburg	342	733.3	74	89	23	8	20	14	14	14	1	1	2	8
Florida	7	1,369.3	2	2	2	0	0	1	0	0	0	0	0	0
Foxborough	109	696.9	26	32	4	4	5	3	3	2	2	0	1	3
Frammingham	566	725.4	142	113	25	11	33	26	11	28	5	3	4	5
Franklin	158	717.2	37	45	8	5	7	8	2	2	4	0	0	2
Freetown	57	815.7	13	16	4	2	4	1	1	1	2	0	1	0
Gardner	219	816.1	44	57	22	6	15	10	5	12	4	1	4	3
Georgetown	54	786.0	13	16	4	1	3	3	2	0	0	0	0	0
Gill	45	2,663.4	13	8	3	1	3	5	1	2	0	0	0	0
Gloucester	269	672.0	63	60	19	5	15	18	5	2	1	0	0	5
Goshen	8	807.4	3	1	0	0	1	1	0	0	0	0	0	0

Table C-33A (continued). Selected Causes of Death by Community, Massachusetts: 2006

CITY/TOWN	Total Deaths	Age-Adjusted Death Rate <sup>1</sup>	Heart Disease	Total Cancer	Lung Cancer	Female Breast Cancer <sup>2</sup>	Stroke	CLRD <sup>3</sup>	Diabetes	Influenza & Pneumonia	Motor Vehicle	Homicide	Suicide	All Narcotics, Psychodysleptics, hallucinogens <sup>5</sup>
Gosnold	0	0.0	0	0	0	0	0	0	0	0	0	0	0	0
Grafton	105	713.8	20	36	14	2	3	7	1	2	0	0	2	0
Granby	37	602.2	11	8	1	3	1	3	0	0	0	0	0	0
Granville	9	677.3	2	2	0	1	2	2	0	0	0	0	0	0
Great Barrington	109	853.0	32	19	5	3	8	7	4	2	3	0	1	1
Greenfield	197	690.2	40	35	9	1	12	8	1	10	1	0	2	2
Groton	54	813.6	10	19	3	2	0	2	1	0	1	0	1	0
Groveland	40	756.1	9	14	10	1	2	3	1	0	1	0	0	0
Hadley	84	913.8	21	13	1	1	2	5	2	1	1	0	1	0
Halifax	57	687.4	15	18	8	0	2	4	3	2	0	0	0	0
Hamilton	37	541.5	9	16	2	1	0	1	0	2	0	0	0	0
Hampden	58	871.4	20	8	2	0	7	2	2	3	1	0	0	1
Hancock	2	-- <sup>4</sup>	0	0	0	0	0	0	0	0	0	0	0	0
Hanover	95	762.7	21	23	5	2	5	6	1	2	0	0	1	2
Hanson	59	866.7	20	12	5	1	3	2	1	0	1	0	1	0
Hardwick	21	692.8	5	8	3	0	2	0	0	0	1	0	0	0
Harvard	41	909.6	8	10	1	2	0	0	0	2	1	0	1	0
Harwich	195	633.2	36	58	15	4	10	14	5	6	1	0	3	1
Hatfield	50	1,041.3	16	17	6	0	2	2	1	2	0	0	0	0
Haverhill	553	795.7	141	128	40	13	25	32	12	19	4	0	5	8
Hawley	2	-- <sup>4</sup>	0	1	0	0	1	0	0	0	0	0	0	0
Heath	6	1,067.0	1	3	1	0	0	0	0	0	0	0	0	0
Hingham	205	762.3	65	55	10	6	12	9	6	7	1	0	0	2
Hinsdale	19	1,327.3	3	5	1	2	0	3	1	0	0	0	0	0
Holbrook	99	787.9	21	22	6	2	10	3	1	4	1	0	0	0
Holden	112	557.5	19	25	7	1	15	5	1	5	1	0	0	0
Holland	12	697.9	5	1	1	0	1	0	2	0	0	0	0	0
Holliston	76	771.3	20	23	2	4	3	4	3	1	0	0	1	0
Holyoke	492	898.3	134	86	25	2	27	29	11	18	4	4	1	1
Hopedale	46	551.7	11	11	4	1	2	1	1	0	0	0	0	0
Hopkinton	63	666.5	15	16	3	2	5	4	2	2	3	2	1	0
Hubbardston	19	808.7	3	5	1	0	0	0	0	0	0	0	0	1
Hudson	106	585.4	34	29	9	2	6	5	3	4	0	0	0	0
Hull	88	803.4	24	27	7	2	5	4	0	1	0	1	0	3



Table C-33A (continued). Selected Causes of Death by Community, Massachusetts: 2006

CITY/TOWN	Total Deaths	Age-Adjusted Death Rate <sup>1</sup>	Heart Disease	Total Cancer	Lung Cancer	Female Breast Cancer <sup>2</sup>	Stroke	CLRD <sup>3</sup>	Diabetes	Influenza & Pneumonia	Motor Vehicle	Homicide	Suicide	All Narcotics, Psychodysleptics, hallucinogens <sup>6</sup>
Huntington	12	602.5	7	3	1	0	0	0	0	1	0	0	0	0
Ipswich	107	583.2	23	34	3	5	3	4	2	9	0	0	0	0
Kingston	127	776.7	33	23	8	2	4	9	0	8	1	0	0	0
Lakeville	67	590.1	14	16	2	3	8	0	2	1	3	0	0	1
Lancaster	49	740.1	13	11	3	1	4	1	1	2	0	0	0	0
Lanesborough	10	351.4	1	0	0	0	1	1	0	1	0	0	0	0
Lawrence	432	650.3	95	113	29	4	13	12	19	17	6	5	3	9
Lee	63	789.9	14	16	4	1	0	3	2	2	1	0	1	0
Leicester	106	911.9	28	29	9	2	7	9	3	3	0	0	1	1
Lenox	85	576.5	30	16	2	0	6	3	0	2	0	0	0	0
Leominster	378	809.8	80	98	28	6	36	18	13	6	6	0	2	3
Leverett	7	427.8	2	2	1	0	1	0	0	0	0	0	0	0
Lexington	236	465.2	54	52	8	1	17	14	4	6	2	0	1	0
Leyden	4	-- <sup>4</sup>	0	1	0	0	1	0	0	0	0	0	0	0
Lincoln	34	524.1	5	7	1	0	6	2	0	1	0	0	0	0
Littleton	63	671.2	12	21	7	2	5	3	0	0	2	0	0	0
Longmeadow	162	592.1	34	34	6	1	10	3	2	9	1	0	3	0
Lowell	881	924.3	200	200	64	12	41	42	11	40	11	12	3	13
Ludlow	174	704.9	47	46	15	2	9	6	3	5	3	0	2	0
Lunenburg	77	770.8	17	19	7	0	4	9	1	1	0	0	1	1
Lynn	708	770.5	173	165	49	13	39	33	23	21	9	2	7	20
Lynnfield	81	521.4	24	23	9	1	5	4	1	1	0	0	1	0
Malden	406	632.1	96	111	41	2	15	15	8	16	1	0	3	8
Manchester	33	461.2	6	10	3	1	1	5	0	0	0	0	0	0
Mansfield	94	697.5	21	23	8	1	5	2	4	5	0	0	1	1
Marblehead	137	500.3	36	44	9	0	8	8	1	3	0	0	0	0
Marion	59	703.1	23	16	6	0	5	3	1	0	2	0	0	0
Marlborough	273	689.3	83	62	14	4	18	9	4	13	0	1	1	1
Marshfield	160	795.7	43	48	14	2	9	4	2	5	2	0	3	2
Mashpee	118	627.9	19	38	9	1	9	8	1	5	2	0	3	0
Mattapoisett	47	507.1	17	9	1	0	6	0	0	1	0	0	0	0
Maynard	63	541.6	11	16	5	2	3	7	3	0	0	0	1	1
Medfield	67	699.3	14	24	5	2	2	1	2	2	0	0	1	0
Medford	538	686.8	120	145	44	10	29	25	14	29	1	1	2	8
Medway	77	722.4	12	18	4	0	5	8	1	0	1	0	0	0
Melrose	268	675.9	77	63	12	6	7	12	3	9	1	0	2	4
Mendon	26	640.1	5	5	2	0	2	1	0	0	0	1	2	1

Table C-33A (continued). Selected Causes of Death by Community, Massachusetts: 2006

CITY/TOWN	Total Deaths	Age- Adjusted Death Rate <sup>1</sup>	Heart Disease	Total Cancer	Lung Cancer	Female Breast Cancer <sup>2</sup>	Stroke	CLRD <sup>3</sup>	Diabetes	Influenza & Pneumonia	Motor Vehicle	Homicide	Suicide	All Narcotics, Psychodysleptics, hallucinogens <sup>6</sup>
Merrimac	42	719.6	13	12	3	2	1	2	0	2	0	0	0	0
Methuen	364	638.6	112	82	20	8	17	19	13	14	2	1	3	3
Middleborough	193	943.4	48	58	17	3	3	6	6	6	2	1	3	2
Middlefield	3	-- <sup>4</sup>	2	0	0	0	0	0	0	0	0	0	0	0
Middleton	61	850.8	19	18	9	1	4	3	0	0	2	0	0	1
Milford	198	614.0	62	48	16	2	10	6	5	5	4	1	2	2
Millbury	143	763.8	31	28	9	2	4	9	1	8	2	0	0	0
Millis	53	909.7	19	15	6	3	2	4	1	0	0	0	1	2
Millville	18	961.7	7	4	4	0	2	0	0	1	0	0	1	0
Milton	221	590.7	53	61	9	6	19	8	5	5	3	1	2	0
Monroe	5	3,880.2	2	1	1	0	0	0	0	0	1	0	0	0
Monson	67	835.3	13	19	10	1	1	5	2	1	1	0	0	1
Montague	60	552.5	12	15	2	3	3	4	3	3	0	1	0	2
Montearey	5	779.8	1	2	2	0	2	0	0	0	0	0	0	0
Montgomery	5	807.3	1	1	1	0	0	0	0	0	0	0	0	0
Mount Washington	1	-- <sup>4</sup>	0	1	0	0	0	0	0	0	0	0	0	1
Nahant	45	725.7	7	11	4	0	4	1	1	3	0	0	1	1
Nantucket	62	725.2	15	14	3	3	4	5	1	2	0	0	2	0
Natick	235	588.1	57	62	14	4	10	9	3	13	1	0	2	2
Needham	297	590.7	70	69	20	6	25	16	4	12	7	0	2	0
New Ashford	1	-- <sup>4</sup>	0	0	0	0	0	0	0	0	0	0	0	0
New Bedford	928	769.3	254	198	52	14	37	34	13	39	10	5	6	27
New Braintree	3	395.5	2	0	0	0	0	0	0	0	0	0	0	0
New Marlborough	12	647.4	1	7	2	0	0	0	1	1	2	0	0	0
New Salem	9	945.1	0	3	1	0	1	0	0	1	0	0	0	1
Newbury	39	600.6	6	11	6	0	0	1	1	1	0	0	0	1
Newburyport	176	763.2	42	37	11	2	8	9	2	13	0	1	1	0
Newton	599	506.4	141	186	47	12	36	20	7	19	4	0	3	3
Norfolk	56	1,117.8	13	15	2	1	2	2	1	4	1	0	0	1
North Adams	191	891.6	41	39	14	5	7	10	5	12	2	0	2	1
North Andover	219	580.8	66	49	13	7	11	13	7	2	3	0	1	1
North Attleboro	195	818.5	41	54	16	6	5	13	5	4	2	1	0	4
North Brookfield	22	439.6	7	5	1	0	0	2	0	0	0	1	1	0

Table C-33A (continued). Selected Causes of Death by Community, Massachusetts: 2006

CITY/TOWN	Total Deaths	Age-Adjusted Death Rate <sup>1</sup>	Heart Disease	Total Cancer	Lung Cancer	Female Breast Cancer <sup>2</sup>	Stroke	CLRD <sup>3</sup>	Diabetes	Influenza & Pneumonia	Motor Vehicle	Homicide	Suicide	All Narcotics, Psychodysleptics, hallucinogens <sup>4</sup>
North Reading	101	863.9	19	31	9	2	7	2	1	4	1	0	0	1
Northampton	286	757.3	51	67	18	1	11	18	8	9	0	0	0	3
Northborough	104	924.7	21	28	6	2	8	4	0	7	0	0	2	2
Northbridge	129	675.7	29	33	15	1	8	4	2	5	1	0	1	1
Northfield	20	533.4	4	6	1	0	2	1	0	1	1	0	1	0
Norton	129	874.2	43	29	12	1	4	8	2	7	0	0	2	3
Norwell	79	611.6	14	23	6	1	5	8	2	3	0	0	0	1
Norwood	288	683.3	65	69	17	6	18	14	8	6	1	0	1	2
Oak Bluffs	44	945.2	14	7	2	0	3	2	0	1	0	0	0	0
Oakham	10	787.7	3	2	1	0	1	0	0	0	0	0	0	1
Orange	73	822.2	20	9	3	0	3	7	0	1	0	0	1	1
Orleans	97	520.5	28	27	9	3	5	3	0	2	0	0	1	1
Otis	11	713.0	3	6	0	0	0	0	0	0	0	0	0	0
Oxford	123	989.7	29	33	11	1	7	5	0	0	0	0	0	1
Palmer	139	794.8	41	23	6	0	9	3	3	12	0	0	0	2
Paxton	27	547.1	6	5	4	0	4	1	2	0	0	0	0	0
Peabody	619	858.3	153	167	36	10	36	34	11	25	4	2	13	4
Pelham	10	948.0	3	4	1	0	1	0	1	0	0	0	0	0
Pembroke	90	688.2	22	32	10	4	3	12	1	3	1	0	0	1
Pepperell	63	808.0	12	12	3	1	3	3	2	0	1	0	1	1
Peru	5	674.1	1	1	1	0	0	0	0	0	0	0	0	0
Petersham	15	876.9	3	6	1	0	0	0	1	1	0	0	0	0
Phillipston	6	586.0	0	2	1	0	1	0	0	0	1	0	0	0
Pittsfield	520	756.6	115	134	41	11	31	32	11	13	6	1	6	0
Plainfield	8	1,116.9	1	0	0	0	1	1	0	0	2	0	0	0
Plainville	62	756.9	16	18	5	2	5	5	1	0	1	0	0	1
Plymouth	463	788.8	134	132	38	10	21	26	6	17	7	0	6	0
Plympton	14	800.6	3	4	0	0	1	0	0	0	1	0	1	0
Princeton	10	416.3	3	3	0	1	0	0	0	0	1	0	0	0
Provincetown	40	746.4	4	11	5	0	2	6	0	1	0	0	1	0
Quincy	875	732.3	207	227	67	15	44	44	20	35	8	2	8	13
Randolph	260	730.2	56	78	26	6	11	16	5	9	3	2	2	2
Raynham	107	705.8	31	21	8	2	3	6	5	3	3	1	1	1
Reading	189	671.5	53	42	11	2	9	7	1	3	3	0	2	0
Rehoboth	63	625.9	12	19	1	1	2	3	1	2	2	0	2	1
Revere	478	815.0	120	118	39	7	28	29	16	14	5	0	3	11
Richmond	10	581.2	2	2	1	0	0	1	0	0	0	0	0	0
Rochester	34	798.0	9	10	4	0	2	2	0	0	0	0	0	0

Table C-33A (continued). Selected Causes of Death by Community, Massachusetts: 2006

CITY/TOWN	Total Deaths	Age-Adjusted Death Rate <sup>1</sup>	Heart Disease	Total Cancer	Lung Cancer	Female Breast Cancer <sup>2</sup>	Stroke	CLRD <sup>3</sup>	Diabetes	Influenza & Pneumonia	Motor Vehicle	Homicide	Suicide	All Narcotics, Psychodysleptics, hallucinogens <sup>6</sup>
Rockland	187	980.7	43	45	14	6	10	14	6	3	1	0	1	4
Rockport	85	607.5	25	23	5	0	4	6	3	0	0	0	0	0
Rowe	5	777.4	0	3	0	0	0	0	0	0	0	0	0	0
Rowley	44	809.3	10	8	2	0	1	5	0	1	0	1	0	0
Royalston	5	356.3	1	1	0	0	0	0	0	0	0	0	0	0
Russell	11	856.5	1	1	1	0	2	1	0	1	1	0	0	0
Rutland	33	573.4	8	10	4	0	2	0	2	0	1	0	0	0
Salem	336	679.0	87	83	32	7	14	13	9	7	6	0	2	9
Salisbury	70	872.9	16	23	6	2	2	5	3	2	2	0	0	4
Sandisfield	3	-- <sup>4</sup>	2	1	0	0	0	0	0	0	0	0	0	0
Sandwich	162	655.6	32	51	12	3	7	10	2	4	1	0	0	2
Saugus	262	689.7	72	66	25	5	21	8	3	6	2	1	1	5
Savoy	3	-- <sup>4</sup>	0	1	0	0	0	1	1	0	0	0	0	0
Scituate	161	722.7	44	45	13	0	4	4	4	6	1	0	1	1
Seekonk	109	766.2	27	28	4	5	7	3	3	4	3	0	1	0
Sharon	115	714.8	29	37	12	1	8	5	2	5	0	0	3	0
Sheffield	21	468.0	2	7	1	2	3	1	0	1	0	0	1	0
Shelburne	26	721.8	6	2	0	2	2	2	2	1	1	0	0	0
Sherborn	29	712.3	4	10	0	1	3	1	0	1	0	0	0	0
Shirley	38	616.0	5	14	5	3	0	1	3	2	1	0	2	0
Shrewsbury	251	686.7	56	63	10	3	16	12	0	12	4	1	2	2
Shutesbury	7	591.2	2	3	1	1	0	0	0	0	1	0	0	0
Somerset	206	636.9	66	55	14	4	17	5	5	8	0	1	0	1
Somerville	467	676.7	115	128	34	3	25	21	15	12	1	1	5	7
South Hadley	178	698.9	37	39	11	2	12	9	3	3	1	0	3	5
Southampton	36	662.2	9	7	3	1	5	4	1	1	0	0	0	0
Southborough	42	654.0	8	12	3	0	3	1	0	2	0	0	0	2
Southbridge	159	751.0	35	36	8	1	9	5	4	7	1	0	2	2
Southwick	87	880.6	19	28	7	2	5	2	3	1	0	0	1	1
Spencer	109	923.9	25	22	5	1	9	15	4	4	2	0	0	2
Springfield	1,256	807.9	268	266	74	18	61	52	29	41	14	14	6	17
Sterling	71	1,240.8	19	20	4	1	5	3	3	1	1	0	0	1
Stockbridge	28	671.0	6	8	4	1	0	2	0	1	1	0	0	0
Stoneham	225	640.1	49	57	16	5	12	19	4	8	0	0	1	3
Stoughton	250	749.9	73	60	14	3	14	8	8	6	1	1	2	2
Stow	29	667.2	7	9	1	1	2	1	0	0	0	0	2	0
Sturbridge	59	611.7	13	20	4	0	3	0	2	1	0	0	0	1
Sudbury	86	619.5	24	19	3	0	6	2	2	2	0	0	1	0



Table C-33A (continued). Selected Causes of Death by Community, Massachusetts: 2006

CITY/TOWN	Total Deaths	Age- Adjusted Death Rate <sup>1</sup>	Heart Disease	Total Cancer	Lung Cancer	Female Breast Cancer <sup>2</sup>	Stroke	CLRD <sup>3</sup>	Diabetes	Influenza & Pneumonia	Motor Vehicle	Homicide	Suicide	All Narcotics, Psychodysleptics, hallucinogens <sup>6</sup>
Sunderland	22	884.1	6	6	0	1	1	1	0	0	0	0	0	0
Sutton	54	869.5	11	17	4	1	4	4	2	0	0	0	1	0
Swampscott	163	658.1	41	39	10	5	6	5	1	6	0	1	2	1
Swansea	154	742.0	32	46	13	2	12	5	3	6	1	2	4	4
Taunton	516	844.2	155	125	48	8	20	24	16	21	8	1	7	5
Templeton	63	771.5	20	19	3	1	2	1	1	3	0	1	1	0
Tewksbury	227	826.9	48	73	17	5	3	14	4	10	0	0	0	0
Tisbury	31	490.6	9	11	6	0	3	0	1	0	0	0	1	0
Tolland	4	-- <sup>4</sup>	1	2	1	0	0	0	1	0	0	0	0	0
Topsfield	42	527.8	11	8	2	0	4	4	1	3	0	0	0	0
Townsend	43	701.5	9	18	6	0	0	2	1	0	0	0	0	0
Truro	21	693.3	4	4	2	0	0	0	1	0	0	0	2	1
Tyngsborough	57	912.5	12	16	6	0	4	5	0	1	0	0	1	0
Tyringham	7	1,812.5	3	1	1	0	0	0	0	0	0	0	0	0
Upton	41	747.1	11	7	2	0	0	3	0	1	1	0	1	0
Uxbridge	78	747.8	14	24	8	3	4	7	3	1	3	0	1	1
Wakefield	225	666.5	63	42	9	6	17	10	4	6	2	2	0	3
Wales	14	1,254.6	1	6	2	1	2	2	0	0	0	0	0	1
Walpole	193	674.6	38	57	23	5	6	5	4	7	1	0	5	4
Waltham	412	618.5	104	91	27	6	36	14	1	15	7	1	7	5
Ware	110	838.0	28	26	7	0	9	4	3	3	2	0	2	0
Wareham	222	808.1	75	50	15	1	6	9	5	8	2	2	1	6
Warren	49	896.4	14	11	3	0	2	2	4	1	0	0	1	0
Warwick	7	1,104.8	2	1	0	0	0	0	0	0	0	0	0	0
Washington	3	-- <sup>4</sup>	0	0	0	0	0	0	0	1	1	0	0	0
Watertown	275	575.3	59	68	13	9	21	9	3	13	3	0	5	2
Wayland	103	656.8	18	36	12	4	5	5	0	7	0	0	1	0
Webster	184	764.4	45	44	12	4	8	11	4	2	1	0	0	0
Wellesley	171	499.0	50	44	8	3	12	5	5	3	1	0	2	0
Wellesley	31	637.9	6	10	3	3	2	1	0	0	0	0	0	0
Wendell	6	1,185.1	1	1	0	0	0	1	0	0	0	0	0	0
Wenham	39	755.6	13	8	1	2	1	1	0	1	0	0	0	0
West Boylston	87	930.3	21	14	5	1	6	6	2	6	1	0	0	0
West														
Bridgewater	76	696.7	25	14	5	0	5	2	2	0	2	0	1	2
West Brookfield	44	613.8	11	11	3	0	1	2	0	2	0	0	0	1
West Newbury	27	804.4	6	9	4	0	2	3	1	2	0	0	0	0

Table C-33A (continued). Selected Causes of Death by Community, Massachusetts: 2006

CITY/TOWN	Total Deaths	Age- Adjusted Death Rate <sup>1</sup>	Heart Disease	Total Cancer	Lung Cancer	Female Breast Cancer <sup>2</sup>	Stroke	CLRD <sup>3</sup>	Diabetes	Influenza & Pneumonia	Motor Vehicle	Homicide	Suicide	All Narcotics, Psychodysleptics, hallucinogens <sup>5</sup>
West Springfield	315	871.8	80	70	23	4	20	12	2	13	3	0	5	4
West Stockbridge	5	291.6	1	1	0	0	0	0	0	0	1	0	0	0
West Tisbury	17	737.0	4	5	0	0	0	3	0	0	0	0	0	0
Westborough	143	639.2	35	32	13	2	7	9	4	3	1	0	0	0
Westfield	364	765.3	83	102	32	7	15	17	5	12	3	1	2	5
Westford	97	694.1	20	26	8	1	7	6	4	6	0	0	1	0
Westhampton	10	828.4	1	2	1	0	2	0	0	0	2	0	0	0
Westminster	50	732.3	17	10	3	0	3	1	1	1	0	0	1	2
Weston	84	467.7	13	22	3	3	3	7	1	2	0	0	1	0
Westport	117	688.1	29	39	9	4	3	5	2	1	1	0	2	1
Westwood	137	547.8	34	39	10	5	6	8	0	2	0	0	2	0
Weymouth	493	733.7	129	123	46	8	26	26	15	10	4	0	3	4
Whately	15	897.1	2	2	0	0	3	1	1	0	1	0	0	0
Whitman	83	657.4	15	26	9	3	4	6	2	1	3	0	2	3
Wilbraham	136	677.8	32	32	4	3	12	5	1	2	1	1	2	0
Williamburg	16	527.3	0	5	2	0	1	2	0	1	1	0	0	1
Williamstown	72	517.4	15	18	6	1	9	4	0	3	0	0	0	0
Wilmington	160	800.3	34	51	22	4	5	12	2	5	0	0	0	2
Winchendon	72	810.3	13	27	9	1	2	3	1	3	0	0	0	2
Winchester	193	547.3	51	45	9	6	18	4	2	7	4	0	3	1
Windsor	7	891.9	3	1	0	0	0	1	0	0	0	0	0	0
Winthrop	198	859.2	47	53	15	3	7	9	5	9	0	0	0	5
Woburn	272	612.3	58	72	38	6	19	12	5	10	1	0	0	2
Worcester	1,656	811.6	382	385	101	31	80	99	38	68	14	6	13	16
Worthington	8	604.9	1	1	0	0	0	3	1	0	1	0	0	0
Wrentham	111	843.1	32	20	4	1	5	4	2	2	0	0	2	2
Yarmouth	366	643.5	92	76	21	5	29	17	8	7	3	1	3	3

1. Age-adjusted death rates are calculated using the Massachusetts (Department of Public Health) Modified Age, Race/Ethnicity, & Sex Estimates 2005 (MMARS05), released October 2006. Data presented in this table are classified according to ICD-10. Please see Section Definitions for a list of ICD-10 codes used in this table. 2. Includes only female breast cancer. 3. The title of this cause of death changed between ICD-10 and ICD-9. 4. Chronic Lower Respiratory Disease (ICD-10 title) corresponds to Chronic Obstructive Pulmonary Disease (COPD) (ICD-9 title). 5. Deaths due to narcotics and hallucinogens including cannabis, cocaine, codeine, heroin, lysergic acid diethylamide (LSD), mescaline, methadone, morphine, and opium (alkaloids).

**Table C-33B. Selected Causes of Death by Community Health Network Area (CHNA), Massachusetts: 2006**

CHNA (Name and Number)	Total Deaths	Age-Adjusted Death Rate <sup>1</sup>	Heart Disease	Total Cancer	Lung Cancer	Breast Cancer <sup>2</sup>	Stroke	CLRD <sup>3</sup>	Diabetes	Influenza & Pneumonia	Motor Vehicle	Homicide	Suicide	Narcotics <sup>4</sup>
<b>Massachusetts</b>	<b>53,293</b>	<b>717.6</b>	<b>12,891</b>	<b>13,375</b>	<b>3,717</b>	<b>962</b>	<b>2,868</b>	<b>2,529</b>	<b>1,127</b>	<b>1,748</b>	<b>475</b>	<b>183</b>	<b>437</b>	<b>628</b>
Community Health Network of Berkshire	1,451	721.4	336	352	106	30	79	83	32	50	19	1	12	2
Upper Valley Health Web (Franklin County)	801	712.9	186	181	41	14	49	40	11	30	8	1	6	5
Partnership for Health in Hampshire County	1,195	706.7	265	267	72	15	76	64	28	30	17	0	8	11
The Community Health Connection (Springfield)	2,769	783.5	624	611	160	43	153	115	55	97	25	15	21	30
Community Health Network of Southern Worcester County	1,030	772.4	265	255	80	11	54	61	25	24	8	1	6	11
Community Partners for Health (Milford)	1,023	695.6	249	266	78	17	54	51	21	20	17	2	12	9
Community Health Network of Greater Metro West (Framingham)	2,668	690.5	661	685	167	60	145	115	51	104	16	6	27	26
Community Wellness Coalition (Worcester)	2,678	760.1	613	641	169	48	139	162	50	108	22	7	18	20
Fitchburg/Gardner Community Health Network	1,962	749.7	419	539	155	39	113	79	56	57	27	3	22	32
Greater Lowell Community Health Network	2,020	840.7	456	541	156	41	79	98	34	86	16	14	11	21
Greater Lawrence Community Health Network	1,316	643.5	360	319	78	28	58	55	41	40	14	6	11	15
Greater Haverhill Community Health Network	1,221	761.2	292	311	99	29	52	68	32	46	9	3	9	16
Community Health Network North (Beverly/Gloucester)	1,024	636.5	247	264	69	19	55	59	18	33	2	0	5	9
North Shore Community Health Network	2,657	727.6	670	662	192	42	149	121	54	90	21	7	28	45
Greater Woburn/Concord/Littleton Community Health	1,588	618.6	331	421	131	42	106	70	22	52	16	0	8	6
North Suburban Health Alliance (Medford/Malden/Melrose)	2,282	677.5	557	575	167	39	112	105	44	80	10	3	13	32
Greater Cambridge/Somerville Community Health Network	1,863	621.5	438	476	106	31	119	62	39	69	10	4	25	21
West Suburban Health Network (Newton/Waltham)	1,964	558.5	490	508	127	43	136	87	21	59	20	1	19	13
Alliance for Community Health (Boston/Chelsea/Revere/Winthrop)	5,126	730.1	1,129	1,254	337	96	276	202	137	149	36	63	38	113
Blue Hills Community Health Alliance (Greater Quincy)	3,382	693.6	819	908	266	57	184	168	81	106	22	7	27	34
Four (For) Communities (Holyoke, Chicopee, Ludlow, Westfield)	1,664	807.1	443	396	130	23	80	89	34	58	12	6	12	12
Greater Brockton Community Health Network	1,901	797.6	494	463	121	33	106	91	46	62	18	12	15	27
South Shore Community Partners in Prevention	1,504	790.5	407	406	124	28	68	91	22	50	20	0	15	10
Greater Attleboro-Taunton Health & Education Response	1,931	785.5	511	481	149	34	77	88	52	74	34	5	20	21
Partners for a Healthier Community (Fall River)	1,507	768.1	415	365	93	24	90	61	39	47	12	4	15	25
Greater New Bedford Health & Human Services Coalition	1,899	729.5	551	439	117	23	89	82	27	65	24	9	10	39
Cape Cod & Islands Community Health Network	2,867	644.3	663	789	227	53	170	162	55	62	20	3	24	23

1. Age-adjusted death rates are calculated using the NCHS population estimates for 2006 by age, sex, race, and Hispanic origin. Data presented in this table are classified according to ICD-10. Please see Section Definitions for a list of ICD-10 codes used in this table. 2. Includes only female breast cancer. 3. The title of this cause of death has changed between ICD-10 and ICD-9. Chronic Lower Respiratory Disease (ICD-10 title) corresponds to Chronic Obstructive Pulmonary Disease (COPD) (ICD-9 title). 4. Deaths due to narcotics and hallucinogens including cannabis, cocaine, codeine, heroin, lysergic acid diethylamide (LSD), mescaline, methadone, morphine, and opium (alkaloids).



**Table C-33C. Selected Causes of Death by County, Massachusetts: 2006**

County	Total Deaths	Age-Adjusted Death Rate <sup>1</sup>	Heart Disease	Total Cancer	Lung Cancer	Breast Cancer <sup>2</sup>	Stroke	Chronic Lower Respiratory Disease <sup>3</sup>	Diabetes	Influenza & Pneumonia	Motor Vehicle	Homicide	Suicide	Narcotics <sup>4</sup>
<b>Massachusetts</b>	<b>53,293</b>	<b>717.6</b>	<b>12,891</b>	<b>13,375</b>	<b>3,717</b>	<b>962</b>	<b>2,868</b>	<b>2,529</b>	<b>1,127</b>	<b>1,748</b>	<b>475</b>	<b>183</b>	<b>437</b>	<b>628</b>
Barnstable	2,673	644.1	611	738	212	48	160	151	52	59	20	3	20	22
Berkshire	1,451	721.4	336	352	106	30	79	83	32	50	19	1	12	2
Bristol	4,862	752.3	1321	1170	328	76	232	221	110	176	62	15	41	77
Dukes	132	682.3	37	37	12	2	6	6	2	1	0	0	2	1
Essex	6,218	698.0	1569	1556	438	118	314	303	145	209	46	16	53	85
Franklin	642	711.2	139	138	28	13	40	37	9	24	7	1	5	5
Hampden	4,489	795.4	1082	1021	296	68	237	210	91	154	39	21	33	43
Hampshire	1,207	705.0	272	270	73	15	76	64	28	31	17	0	8	11
Middlesex	10,855	663.5	2524	2828	755	222	599	463	189	403	79	28	90	102
Nantucket	62	725.2	15	14	3	3	4	5	1	2	0	0	2	0
Norfolk	5,426	667.0	1311	1420	392	107	306	260	117	158	44	8	51	52
Plymouth	4,021	783.2	1100	1042	288	70	197	202	79	128	46	15	32	48
Suffolk	4,802	755.1	1054	1170	317	90	261	193	129	134	35	62	35	111
Worcester	6,453	742.1	1520	1619	469	100	357	331	143	219	61	13	53	69

1. Age-adjusted death rates are calculated using the NCHS population estimates for 2006 by age, sex, race, and Hispanic origin. All rates are age-adjusted using the 2000 U.S. standard population. Data presented in this table are classified according to ICD-10. Please see Section Definitions for a list of ICD-10 codes used in this table. 2. Includes only female breast cancer. 3. The title of this cause of death has changed between ICD-10 and ICD-9. Chronic Lower Respiratory Disease (ICD-10 title) corresponds to Chronic Obstructive Pulmonary Disease (COPD) (ICD-9 title). 4. Deaths due to narcotics and hallucinogens including cannabals, cocaine, codeine, heroin, lysergic acid diethylamide (LSD), mescaline, methadone, morphine, and opium (alkaloids).



Table C-34. Resident Deaths by Cause, Sex, and Race<sup>1</sup>,  
Massachusetts: 2006

ICD Code Cause of Death	Totals			White			Black			Other		
	Tot	Male	Fem	Tot	Male	Fem	Tot	Male	Fem	Tot	Male	Fem
A02 Other salmonella infections	1	1	0	1	1	0	0	0	0	0	0	0
A04 Other bacterial intestinal infections	215	67	148	208	62	146	5	3	2	2	2	0
A08 Viral and other specified intestinal infections	1	1	0	1	1	0	0	0	0	0	0	0
A09 Diarrhoea and gastroenteritis of presumed infectious origin	7	2	5	7	2	5	0	0	0	0	0	0
A16 Respiratory TB not confirmed bacteriologically or histologically	5	3	2	4	2	2	1	1	0	0	0	0
A17 Tuberculosis of nervous system	1	0	1	0	0	0	0	0	0	1	0	1
A18 Tuberculosis of other organs	3	3	0	2	2	0	0	0	0	1	1	0
A30 Leprosy [Hansen's disease]	1	1	0	0	0	0	1	1	0	0	0	0
A31 Infection due to other mycobacteria	3	1	2	2	1	1	0	0	0	1	0	1
A32 Listeriosis	1	1	0	1	1	0	0	0	0	0	0	0
A39 Meningococcal infection	1	0	1	1	0	1	0	0	0	0	0	0
A40 Streptococcal septicaemia	3	1	2	3	1	2	0	0	0	0	0	0
A41 Other septicaemia	890	392	498	822	365	457	56	22	34	12	5	7
A43 Nocardiosis	1	1	0	1	1	0	0	0	0	0	0	0
A48 Other bacterial diseases, NEC	7	4	3	7	4	3	0	0	0	0	0	0
A49 Bacterial infection of unspecified site	42	24	18	39	23	16	3	1	2	0	0	0
A52 Late syphilis	1	0	1	1	0	1	0	0	0	0	0	0
A81 Slow virus infections of central nervous system	10	1	9	8	1	7	2	0	2	0	0	0
A83 Mosquito-borne viral encephalitis	1	1	0	1	1	0	0	0	0	0	0	0
A86 Unspecified viral encephalitis	6	1	5	6	1	5	0	0	0	0	0	0
B00 Herpesviral [herpes simplex] infections	6	3	3	6	3	3	0	0	0	0	0	0
B02 Zoster [herpes zoster]	4	1	3	4	1	3	0	0	0	0	0	0
B16 Acute hepatitis B	4	3	1	2	2	0	2	1	1	0	0	0
B18 Chronic viral hepatitis	67	51	16	58	42	16	7	7	0	2	2	0
B20 Human immunodeficiency virus (HIV) disease resulting in infectious parasitic diseases	77	51	26	53	34	19	24	17	7	0	0	0
B21 Human immunodeficiency virus (HIV) disease resulting in malignant neoplasms	12	10	2	9	9	0	3	1	2	0	0	0
B22 Human immunodeficiency virus (HIV) disease resulting in other specified diseases	13	9	4	10	8	2	3	1	2	0	0	0
B23 Human immunodeficiency virus (HIV) disease resulting in other conditions	38	29	9	24	19	5	14	10	4	0	0	0
B24 Unspecified human immunodeficiency virus (HIV) disease	39	23	16	31	18	13	6	4	2	2	1	1
B25 Cytomegaloviral disease	1	0	1	1	0	1	0	0	0	0	0	0
B34 Viral infection of unspecified site	3	1	2	2	0	2	0	0	0	1	1	0
B37 Candidiasis	3	3	0	2	2	0	1	1	0	0	0	0
B44 Aspergillosis	4	2	2	4	2	2	0	0	0	0	0	0
B45 Cryptococcosis	1	1	0	1	1	0	0	0	0	0	0	0
B49 Unspecified mycosis	8	3	5	8	3	5	0	0	0	0	0	0
B54 Unspecified malaria	1	0	1	0	0	0	1	0	1	0	0	0
B58 Toxoplasmosis	1	1	0	1	1	0	0	0	0	0	0	0
B59 Pneumocystosis	4	3	1	4	3	1	0	0	0	0	0	0
B60 Other protozoal diseases NEC	1	1	0	1	1	0	0	0	0	0	0	0
B90 Sequelae of tuberculosis	1	1	0	1	1	0	0	0	0	0	0	0
B91 Sequelae of poliomyelitis	3	1	2	3	1	2	0	0	0	0	0	0

Table C-34 (continued). Resident Deaths by Cause, Sex, and Race<sup>1</sup>,  
Massachusetts: 2006

ICD Code Cause of Death	Totals			White			Black			Other		
	Tot	Male	Fem	Tot	Male	Fem	Tot	Male	Fem	Tot	Male	Fem
B94 Sequelae of other and unspecified Infectious and parasitic diseases	46	27	19	41	27	14	4	0	4	1	0	1
B99 Other and unspecified infectious diseases	7	4	3	7	4	3	0	0	0	0	0	0
C00 Malignant neoplasm of lip	2	1	1	2	1	1	0	0	0	0	0	0
C01 Malignant neoplasm of base of tongue	1	1	0	1	1	0	0	0	0	0	0	0
C02 Malignant neoplasm of other and unspecified parts of tongue	45	23	22	41	20	21	2	2	0	2	1	1
C03 Malignant neoplasm of gum	2	1	1	2	1	1	0	0	0	0	0	0
C04 Malignant neoplasm of floor of mouth	5	3	2	5	3	2	0	0	0	0	0	0
C05 Malignant neoplasm of palate	4	2	2	4	2	2	0	0	0	0	0	0
C06 Malignant neoplasm of other and unspecified parts of mouth	26	12	14	24	11	13	2	1	1	0	0	0
C07 Malignant neoplasm of parotid gland	9	4	5	9	4	5	0	0	0	0	0	0
C08 Malignant neoplasm of other and unspecified major salivary glands	4	3	1	3	3	0	1	0	1	0	0	0
C09 Malignant neoplasm of tonsil	6	5	1	5	4	1	1	1	0	0	0	0
C10 Malignant neoplasm of oropharynx	18	14	4	16	12	4	2	2	0	0	0	0
C11 Malignant neoplasm of nasopharynx	15	8	7	10	4	6	0	0	0	5	4	1
C12 Malignant neoplasm of pyriform sinus	2	1	1	2	1	1	0	0	0	0	0	0
C13 Malignant neoplasm of hypopharynx	2	2	0	2	2	0	0	0	0	0	0	0
C14 Malignant neoplasm of other and ill-defined sites in the lip, oral cavity and pharynx	40	31	9	38	30	8	2	1	1	0	0	0
C15 Malignant neoplasm of oesophagus	393	307	86	374	293	81	11	8	3	8	6	2
C16 Malignant neoplasm of stomach	264	169	95	240	156	84	16	9	7	8	4	4
C17 Malignant neoplasm of small intestine	26	12	14	23	12	11	2	0	2	1	0	1
C18 Malignant neoplasm of colon	992	471	521	935	446	489	43	19	24	14	6	8
C19 Malignant neoplasm of rectosigmoid junction	60	35	25	57	33	24	2	1	1	1	1	0
C20 Malignant neoplasm of rectum	178	99	79	162	88	74	10	6	4	6	5	1
C21 Malignant neoplasm of anus and anal canal	17	12	5	15	10	5	2	2	0	0	0	0
C22 Malignant neoplasm of liver and intrahepatic bile ducts	392	272	120	338	230	108	27	18	9	27	24	3
C23 Malignant neoplasm of gallbladder	36	5	31	34	5	29	0	0	0	2	0	2
C24 Malignant neoplasm of other and unspecified parts biliary tract	41	14	27	36	12	24	3	1	2	2	1	1
C25 Malignant neoplasm of pancreas	810	391	419	766	372	394	31	14	17	13	5	8
C26 Malignant neoplasm of other and ill-defined digestive organs	29	9	20	29	9	20	0	0	0	0	0	0
C30 Malignant neoplasm of nasal cavity and middle ear	2	0	2	2	0	2	0	0	0	0	0	0
C31 Malignant neoplasm of accessory sinuses	4	1	3	3	1	2	1	0	1	0	0	0
C32 Malignant neoplasm of larynx	70	53	17	66	50	16	4	3	1	0	0	0
C33 Malignant neoplasm of trachea	2	1	1	2	1	1	0	0	0	0	0	0
C34 Malignant neoplasm of bronchus and lung	3715	1958	1757	3523	1844	1679	134	81	53	58	33	25
C37 Malignant neoplasm of thymus	3	3	0	2	2	0	1	1	0	0	0	0
C38 Malignant neoplasm of heart, mediastinum and pleura	7	3	4	6	3	3	1	0	1	0	0	0
C39 Malignant neoplasm of other and ill-defined sites in the respiratory system and intrathoracic organs	1	0	1	1	0	1	0	0	0	0	0	0
C40 Malignant neoplasm of bone and articular cartilage of limbs	3	3	0	3	3	0	0	0	0	0	0	0
C41 Malignant neoplasm of bone and articular cartilage of other and unspecified sites	23	11	12	22	10	12	1	1	0	0	0	0
C43 Malignant melanoma of skin	214	129	85	213	129	84	0	0	0	1	0	1

Table C-34 (continued). Resident Deaths by Cause, Sex, and Race<sup>1</sup>,  
Massachusetts: 2006

ICD Code Cause of Death	Totals			White			Black			Other		
	Tot	Male	Fem	Tot	Male	Fem	Tot	Male	Fem	Tot	Male	Fem
C44 Other malignant neoplasms of skin	75	52	23	73	50	23	0	0	0	2	2	0
C45 Mesothelioma	71	54	17	70	53	17	1	1	1	0	0	0
C47 Malignant neoplasm peripheral nerves and autonomic nervous system	1	0	1	0	0	0	1	0	1	0	0	0
C48 Malignant neoplasm of retroperitoneum and peritoneum	24	1	23	23	1	22	1	0	1	0	0	0
C49 Malignant neoplasm of other connective and soft tissue	78	43	35	73	40	33	3	2	1	0	0	0
C50 Malignant neoplasm of breast	976	14	962	896	12	884	63	1	62	17	1	16
C51 Malignant neoplasm of vulva	28	0	28	28	0	28	0	0	0	0	0	0
C52 Malignant neoplasm of vagina	7	0	7	6	0	6	1	0	1	0	0	0
C53 Malignant neoplasm of cervix uteri	51	0	51	45	0	45	5	0	5	1	0	1
C54 Malignant neoplasm of corpus uteri	94	0	94	87	0	87	6	0	6	1	0	1
C55 Malignant neoplasm of uterus, part unspecified	86	0	86	80	0	80	4	0	4	2	0	2
C56 Malignant neoplasm of ovary	386	0	386	365	0	365	16	0	16	5	0	5
C57 Malignant neoplasm of other and unspecified female genital organs	9	0	9	9	0	9	0	0	0	0	0	0
C60 Malignant neoplasm of penis	5	5	0	5	5	0	0	0	0	0	0	0
C61 Malignant neoplasm of prostate	672	672	0	639	639	0	31	31	0	2	2	0
C62 Malignant neoplasm of testis	4	4	0	4	4	0	0	0	0	0	0	0
C64 Malignant neoplasm of kidney, except renal pelvis	287	176	111	276	169	107	10	6	4	1	1	0
C65 Malignant neoplasm of renal pelvis	5	3	2	5	3	2	0	0	0	0	0	0
C66 Malignant neoplasm of ureter	9	5	4	9	5	4	0	0	0	0	0	0
C67 Malignant neoplasm of bladder	355	261	94	346	258	88	9	3	6	0	0	0
C68 Malignant neoplasm of other and unspecified urinary organs	10	8	2	9	7	2	0	0	0	1	1	0
C69 Malignant neoplasm of eye and adnexa	6	3	3	5	3	2	1	0	1	0	0	0
C70 Malignant neoplasm of meninges	1	0	1	1	0	1	0	0	0	0	0	0
C71 Malignant neoplasm of brain	291	171	120	284	167	117	5	2	3	2	2	0
C72 Malignant neoplasm of spinal cord, cranial nerves & other parts of central nervous system	4	4	0	4	4	0	0	0	0	0	0	0
C73 Malignant neoplasm of thyroid gland	36	13	23	35	13	22	0	0	0	1	0	1
C74 Malignant neoplasm of adrenal gland	13	6	7	12	6	6	1	0	1	0	0	0
C75 Malignant neoplasm of other endocrine glands and related structures	3	1	2	2	1	1	1	0	1	0	0	0
C76 Malignant neoplasm of other and ill-defined sites	53	21	32	51	19	32	2	2	0	0	0	0
C78 Secondary malignant neoplasm of respiratory and digestive organs	72	42	30	69	40	29	2	2	0	1	0	1
C79 Secondary malignant neoplasm of other sites	102	59	43	95	56	39	5	2	3	2	1	1
C80 Malignant neoplasm without specification of site	730	352	378	683	330	353	38	18	20	9	4	5
C81 Hodgkin's disease	26	13	13	25	12	13	1	1	0	0	0	0
C82 Follicular [nodular] non-Hodgkin's lymphoma	9	5	4	9	5	4	0	0	0	0	0	0
C83 Diffuse non-Hodgkin's lymphoma	46	26	20	44	25	19	2	1	1	0	0	0
C84 Peripheral and cutaneous T-cell lymphomas	19	8	11	19	8	11	0	0	0	0	0	0
C85 Other and unspecified types of non-Hodgkin's lymphoma	414	213	201	394	201	193	14	8	6	6	4	2
C88 Malignant immunoproliferative diseases	7	4	3	7	4	3	0	0	0	0	0	0
C90 Multiple myeloma and malignant plasma cell neoplasms	237	125	112	218	115	103	16	10	6	3	0	3
C91 Lymphoid leukaemia	131	82	49	122	78	44	7	3	4	2	1	1
C92 Myeloid leukaemia	247	126	121	230	115	115	9	5	4	8	6	2



Table C-34 (continued). Resident Deaths by Cause, Sex, and Race<sup>1</sup>,  
Massachusetts: 2006

ICD Code Cause of Death	Totals			White			Black			Other		
	Tot	Male	Fem	Tot	Male	Fem	Tot	Male	Fem	Tot	Male	Fem
C93 Monocytic leukaemia	1	1	0	1	1	0	0	0	0	0	0	0
C94 Other leukaemias of specified cell type	2	0	2	2	0	2	0	0	0	0	0	0
C95 Leukaemia of unspecified cell type	137	77	60	130	72	58	7	5	2	0	0	0
C97 Malignant neoplasms of independent (primary) multiple sites	92	42	50	88	41	47	2	0	2	2	1	1
D11 Benign neoplasm of major salivary glands	2	0	2	2	0	2	0	0	0	0	0	0
D15 Benign neoplasm of other and unspecified intrathoracic organ	2	1	1	2	1	1	0	0	0	0	0	0
D21 Other benign neoplasms of connective and other soft tissue	2	2	0	2	2	0	0	0	0	0	0	0
D23 Other benign neoplasms of skin	1	1	0	1	1	0	0	0	0	0	0	0
D25 Leiomyoma of uterus	2	0	2	2	0	2	0	0	0	0	0	0
D32 Benign neoplasm of meninges	19	8	11	16	6	10	2	1	1	1	1	0
D33 Benign neoplasm brain and other parts of central nervous	2	2	0	2	2	0	0	0	0	0	0	0
D35 Benign neoplasm of other and unspecified endocrine glands	2	1	1	2	1	1	0	0	0	0	0	0
D37 Neoplasm of uncertain or unknown behaviour oral cavity and digestive organs	21	10	11	19	10	9	0	0	0	2	0	2
D38 Neoplasm of uncertain or unknown behaviour of middle ear and respiratory and intrathoracic organs	14	8	6	13	8	5	0	0	0	1	0	1
D39 Neoplasm of uncertain or unknown behaviour of female genital organs	3	0	3	3	0	3	0	0	0	0	0	0
D41 Neoplasm of uncertain or unknown behaviour of urinary organs	5	3	2	5	3	2	0	0	0	0	0	0
D42 Neoplasm of uncertain or unknown behaviour of meninges	1	1	0	1	1	0	0	0	0	0	0	0
D43 Neoplasm of uncertain or unknown behaviour of brain and central nervous system	98	41	57	95	40	55	3	1	2	0	0	0
D44 Neoplasm of uncertain or unknown behaviour of endocrine glands	2	1	1	2	1	1	0	0	0	0	0	0
D45 Polycythaemia vera	7	2	5	7	2	5	0	0	0	0	0	0
D46 Myelodysplastic syndromes	136	68	68	132	67	65	2	1	1	2	0	2
D47 Other neoplasms of uncertain or unknown behaviour of lymphoid, haematopoietic and related issues	43	27	16	43	27	16	0	0	0	0	0	0
D48 Neoplasm uncertain or unknown behaviour of other and unspecified sites	26	13	13	25	13	12	0	0	0	1	0	1
D50 Iron deficiency anaemia	3	1	2	3	1	2	0	0	0	0	0	0
D57 Sickle-cell disorders	4	3	1	0	0	0	4	3	1	0	0	0
D58 Other hereditary haemolytic anaemias	3	2	1	3	2	1	0	0	0	0	0	0
D59 Acquired haemolytic anaemia	2	0	2	2	0	2	0	0	0	0	0	0
D60 Acquired pure red cell aplasia [erythroblastopenia]	1	1	0	1	1	0	0	0	0	0	0	0
D61 Other aplastic anaemias	14	5	9	14	5	9	0	0	0	0	0	0
D64 Other anaemias	55	18	37	54	18	36	1	0	1	0	0	0
D65 Dissem intravascular coagulation [defibrination syndrome]	17	8	9	16	8	8	1	0	1	0	0	0
D66 Hereditary factor VIII deficiency	2	2	0	1	1	0	1	1	0	0	0	0
D68 Other coagulation defects	22	12	10	20	12	8	1	0	1	1	0	1
D69 Purpura and other haemorrhagic conditions	17	7	10	13	6	7	3	1	2	1	0	1
D70 Agranulocytosis	3	3	0	3	3	0	0	0	0	0	0	0
D71 Functional disorders of polymorphonuclear neutrophils	2	2	0	1	1	0	0	0	0	1	1	0
D72 Other disorders of white blood cells	2	0	2	2	0	2	0	0	0	0	0	0
D73 Diseases of spleen	4	2	2	4	2	2	0	0	0	0	0	0
D75 Other diseases of blood and blood-forming organs	1	0	1	1	0	1	0	0	0	0	0	0



Table C-34 (continued). Resident Deaths by Cause, Sex, and Race<sup>1</sup>,  
Massachusetts: 2006

ICD Code Cause of Death	Totals			White			Black			Other		
	Tot	Male	Fem	Tot	Male	Fem	Tot	Male	Fem	Tot	Male	Fem
D76 Certain diseases Involving lymphoretic tissue and reticulohistocytic system	1	0	1	1	0	1	0	0	0	0	0	0
D82 Immunodeficiency associated with other major defects	1	1	0	0	0	0	1	1	0	0	0	0
D84 Other immunodeficiencies	5	4	1	4	3	1	1	1	0	0	0	0
D86 Sarcoidosis	12	6	6	6	2	4	6	4	2	0	0	0
D89 Other disorders involving the Immune mechanism NEC	3	3	0	2	2	0	1	1	0	0	0	0
E03 Other hypothyroidism	23	3	20	22	3	19	1	0	1	0	0	0
E04 Other nontoxic goitre	1	0	1	1	0	1	0	0	0	0	0	0
E05 Thyrotoxicosis [hyperthyroidism]	5	2	3	5	2	3	0	0	0	0	0	0
E06 Thyroiditis	1	0	1	1	0	1	0	0	0	0	0	0
E07 Other disorders of thyroid	1	0	1	1	0	1	0	0	0	0	0	0
E10 Insulin-dependent diabetes mellitus	59	28	31	53	25	28	6	3	3	0	0	0
E11 Non-insulin-dependent diabetes mellitus	124	57	67	119	54	65	4	3	1	1	0	1
E14 Unspecified diabetes mellitus	944	484	460	848	436	412	81	43	38	15	5	10
E16 Other disorders of pancreatic Internal secretion	2	1	1	2	1	1	0	0	0	0	0	0
E21 Hyperparathyroidism and other disorders of parathyroid	2	0	2	2	0	2	0	0	0	0	0	0
E23 Hypofunction and other disorders of pituitary gland	1	1	0	1	1	0	0	0	0	0	0	0
E24 Cushing's syndrome	1	0	1	1	0	1	0	0	0	0	0	0
E27 Other disorders of adrenal gland	3	0	3	3	0	3	0	0	0	0	0	0
E34 Other endocrine disorders	1	0	1	1	0	1	0	0	0	0	0	0
E43 Unspecified severe protein-energy malnutrition	3	3	0	1	1	0	1	1	0	1	1	0
E46 Unspecified protein-energy malnutrition	31	10	21	29	9	20	0	0	0	2	1	1
E51 Thiamine deficiency	1	1	0	1	1	0	0	0	0	0	0	0
E53 Deficiency of other B group vitamins	2	0	2	2	0	2	0	0	0	0	0	0
E63 Other nutritional deficiencies	1	0	1	1	0	1	0	0	0	0	0	0
E66 Obesity	60	19	41	56	17	39	4	2	2	0	0	0
E71 Disorders of branched-chain amino-acid metabolism + fatty-acid metabolism	1	1	0	1	1	0	0	0	0	0	0	0
E75 Disorders sphingolipid metabolism and other lipid storage disorders	3	0	3	2	0	2	0	0	0	1	0	1
E77 Disorders of glycoprotein metabolism	1	1	0	1	1	0	0	0	0	0	0	0
E78 Disorders of lipoprotein metabolism and other lipidaemias	106	57	49	100	55	45	5	2	3	1	0	1
E83 Disorders of mineral metabolism	9	5	4	9	5	4	0	0	0	0	0	0
E84 Cystic fibrosis	19	6	13	18	6	12	1	0	1	0	0	0
E85 Amyloidosis	29	18	11	26	16	10	3	2	1	0	0	0
E86 Volume depletion	87	25	62	83	23	60	2	1	1	2	1	1
E87 Other disorders of fluid, electrolyte and acid-base balance	52	25	27	43	21	22	8	4	4	1	0	1
E88 Other metabolic disorders	13	7	6	13	7	6	0	0	0	0	0	0
F01 Vascular dementia	186	65	121	176	59	117	8	5	3	2	1	1
F03 Unspecified dementia	2091	594	1497	2022	569	1453	47	16	31	22	9	13
F05 Delirium not induced by alcohol and other psychoactive	12	7	5	11	6	5	1	1	0	0	0	0
F06 Other mental disorders due to brain damage and dysfunction and to physical disease	112	40	72	111	40	71	1	0	1	0	0	0
F10 Mental and behavioural disorders due to use of alcohol	195	148	47	179	139	40	14	8	6	2	1	1
F11 Mental and behavioural disorders due to use of opiods	1	1	0	1	1	0	0	0	0	0	0	0

Table C-34 (continued). Resident Deaths by Cause, Sex, and Race<sup>1</sup>,  
Massachusetts: 2006

ICD Code Cause of Death	Totals			White			Black			Other		
	Tot	Male	Fem	Tot	Male	Fem	Tot	Male	Fem	Tot	Male	Fem
F14 Mental and behavioural disorders due to use of cocaine	12	10	2	9	8	1	3	2	1	0	0	0
F17 Mental and behavioural disorders due to use of tobacco	4	1	3	3	1	2	1	0	1	0	0	0
F19 Mental and behavioural disorders due to use of multiple drug use or other psychoactive substances	32	24	8	27	21	6	5	3	2	0	0	0
F20 Schizophrenia	7	2	5	6	2	4	0	0	0	1	0	1
F25 Schizoaffective disorders	1	0	1	1	0	1	0	0	0	0	0	0
F29 Unspecified nonorganic psychosis	4	2	2	4	2	2	0	0	0	0	0	0
F32 Depressive episode	20	6	14	20	6	14	0	0	0	0	0	0
F43 Reaction to severe stress and adjustment disorders	1	1	0	1	1	0	0	0	0	0	0	0
F50 Eating disorders	1	0	1	1	0	1	0	0	0	0	0	0
F54 Psychological and behavioural factor associated with disorders or diseases classified elsewhere	4	3	1	4	3	1	0	0	0	0	0	0
F79 Unspecified mental retardation	5	3	2	5	3	2	0	0	0	0	0	0
F84 Pervasive developmental disorders	1	0	1	1	0	1	0	0	0	0	0	0
F99 Mental disorder, not otherwise specified	1	0	1	1	0	1	0	0	0	0	0	0
G00 Bacterial meningitis, not elsewhere classified	4	1	3	2	0	2	1	0	1	1	1	0
G03 Meningitis due to other and unspecified causes	3	1	2	3	1	2	0	0	0	0	0	0
G04 Encephalitis myelitis and encephalomyelitis	12	5	7	12	5	7	0	0	0	0	0	0
G06 Intracranial and intraspinal abscess and granuloma	12	5	7	11	5	6	1	0	1	0	0	0
G08 Intracranial and intraspinal phlebitis and thrombophlebitis	1	0	1	1	0	1	0	0	0	0	0	0
G10 Huntington's disease	23	14	9	21	14	7	1	0	1	1	0	1
G11 Hereditary ataxia	7	5	2	6	4	2	1	1	0	0	0	0
G12 Spinal muscular atrophy and related syndromes	156	79	77	149	75	74	2	0	2	5	4	1
G20 Parkinson's disease	418	231	187	406	227	179	8	3	5	4	1	3
G21 Secondary parkinsonism	3	1	2	3	1	2	0	0	0	0	0	0
G23 Other degenerative diseases of basal ganglia	12	4	8	12	4	8	0	0	0	0	0	0
G24 Dystonia	1	0	1	1	0	1	0	0	0	0	0	0
G25 Other extrapyramidal and movement disorders	2	1	1	2	1	1	0	0	0	0	0	0
G30 Alzheimer's disease	1556	414	1142	1500	400	1100	40	10	30	16	4	12
G31 Other degenerative diseases of nervous system NEC	86	52	34	86	52	34	0	0	0	0	0	0
G35 Multiple sclerosis	90	38	52	86	36	50	4	2	2	0	0	0
G37 Other demyelinating diseases of central nervous system	3	1	2	3	1	2	0	0	0	0	0	0
G40 Epilepsy	10	7	3	10	7	3	0	0	0	0	0	0
G41 Status epilepticus	9	3	6	8	2	6	1	1	0	0	0	0
G45 Transient cerebral ischaemic attacks and related syndrome	2	0	2	1	0	1	1	0	1	0	0	0
G47 Sleep disorders	11	5	6	11	5	6	0	0	0	0	0	0
G61 Inflammatory polyneuropathy	3	1	2	3	1	2	0	0	0	0	0	0
G62 Other polyneuropathies	8	5	3	8	5	3	0	0	0	0	0	0
G70 Myasthenia gravis and other myoneural disorders	16	8	8	16	8	8	0	0	0	0	0	0
G71 Primary disorders of muscles	23	17	6	23	17	6	0	0	0	0	0	0
G72 Other myopathies	7	3	4	7	3	4	0	0	0	0	0	0

Table C-34 (continued). Resident Deaths by Cause, Sex, and Race<sup>1</sup>,  
Massachusetts: 2006

ICD Code Cause of Death	Totals			White			Black			Other		
	Tot	Male	Fem	Tot	Male	Fem	Tot	Male	Fem	Tot	Male	Fem
G80 Infantile cerebral palsy	20	11	9	17	9	8	3	2	1	0	0	0
G81 Hemiplegia	3	1	2	3	1	2	0	0	0	0	0	0
G82 Paraplegia and tetraplegia	22	15	7	20	14	6	2	1	1	0	0	0
G83 Other paralytic syndromes	1	1	0	1	1	0	0	0	0	0	0	0
G90 Disorders of autonomic nervous system	4	2	2	4	2	2	0	0	0	0	0	0
G91 Hydrocephalus	16	12	4	15	11	4	1	1	0	0	0	0
G92 Toxic encephalopathy	2	1	1	2	1	1	0	0	0	0	0	0
G93 Other disorders of brain	178	96	82	156	84	72	15	8	7	7	4	3
G95 Other diseases of spinal cord	3	2	1	3	2	1	0	0	0	0	0	0
G98 Other disorders of nervous system, not elsewhere classified	1	1	0	1	1	0	0	0	0	0	0	0
H40 Glaucoma	1	0	1	1	0	1	0	0	0	0	0	0
H49 Paralytic strabismus	1	1	0	1	1	0	0	0	0	0	0	0
H50 Other strabismus	1	0	1	0	0	0	1	0	1	0	0	0
I01 Rheumatic fever with heart involvement	1	0	1	1	0	1	0	0	0	0	0	0
I05 Rheumatic mitral valve diseases	30	9	21	28	9	19	1	0	1	1	0	1
I07 Rheumatic tricuspid valve diseases	8	1	7	8	1	7	0	0	0	0	0	0
I08 Multiple valve diseases	15	4	11	15	4	11	0	0	0	0	0	0
I09 Other rheumatic heart diseases	19	8	11	19	8	11	0	0	0	0	0	0
I10 Essential (primary) hypertension	305	114	191	285	106	179	19	7	12	1	1	0
I11 Hypertensive heart disease	519	240	279	475	213	262	39	23	16	5	4	1
I12 Hypertensive renal disease	122	47	75	106	37	69	12	8	4	4	2	2
I13 Hypertensive heart and renal disease	37	18	19	32	15	17	2	2	0	3	1	2
I20 Angina pectoris	5	2	3	5	2	3	0	0	0	0	0	0
I21 Acute myocardial infarction	2522	1277	1245	2406	1208	1198	80	43	37	36	26	10
I24 Other acute ischaemic heart diseases	45	21	24	43	20	23	0	0	0	2	1	1
I25 Chronic ischaemic heart disease	5403	2691	2712	5201	2580	2621	149	86	63	53	25	28
I26 Pulmonary embolism	161	60	101	150	54	96	8	5	3	3	1	2
I27 Other pulmonary heart diseases	122	37	85	113	36	77	7	1	6	2	0	2
I28 Other diseases of pulmonary vessels	1	1	0	1	1	0	0	0	0	0	0	0
I31 Other diseases of pericardium	12	6	6	12	6	6	0	0	0	0	0	0
I33 Acute and subacute endocarditis	18	11	7	18	11	7	0	0	0	0	0	0
I34 Nonrheumatic mitral valve disorders	62	26	36	61	26	35	1	0	1	0	0	0
I35 Nonrheumatic aortic valve disorders	381	126	255	370	124	246	9	2	7	2	0	2
I38 Endocarditisvalve unspecified	100	42	58	93	39	54	6	3	3	1	0	1
I40 Acute myocarditis	13	9	4	13	9	4	0	0	0	0	0	0
I42 Cardiomyopathy	411	234	177	387	222	165	20	11	9	4	1	3
I44 Atrioventricular and left bundle-branch block	5	1	4	4	1	3	0	0	0	1	0	1
I45 Other conduction disorders	26	15	11	24	14	10	2	1	1	0	0	0
I46 Cardiac arrest	382	179	203	374	173	201	7	5	2	1	1	0
I47 Paroxysmal tachycardia	13	7	6	12	6	6	1	1	0	0	0	0
I48 Atrial fibrillation and flutter	336	116	220	326	113	213	7	3	4	3	0	3



Table C-34 (continued). Resident Deaths by Cause, Sex, and Race<sup>1</sup>,  
Massachusetts: 2006

ICD Code Cause of Death	Totals		White		Black		Other	
	Tot	Male Fem	Tot	Male Fem	Tot	Male Fem	Tot	Male Fem
I49 Other cardiac arrhythmias	255	119 136	234	105 129	18	12 6	3	2 1
I50 Heart failure	1800	667 1133	1746	647 1099	44	18 26	10	2 8
I51 Complications and ill-defined descriptions of heart disease	189	88 101	180	84 96	5	2 3	4	2 2
I60 Subarachnoid haemorrhage	112	37 75	100	33 67	9	4 5	3	0 3
I61 Intracerebral haemorrhage	333	126 207	305	114 191	15	3 12	13	9 4
I62 Other nontraumatic Intracranial haemorrhage	242	118 124	224	114 110	9	3 6	9	1 8
I63 Cerebral infarction	153	61 92	143	56 87	8	4 4	2	1 1
I64 Stroke not specified as haemorrhage or infarction	1443	484 959	1357	455 902	63	22 41	23	7 16
I67 Other cerebrovascular diseases	94	32 62	90	29 61	3	3 0	1	0 1
I69 Sequelae of cerebrovascular disease	491	195 296	459	177 282	20	13 7	12	5 7
I70 Atherosclerosis	215	78 137	210	75 135	5	3 2	0	0 0
I71 Aortic aneurysm and dissection	302	175 127	289	168 121	8	4 4	5	3 2
I72 Other aneurysm	12	8 4	10	7 3	2	1 1	0	0 0
I73 Other peripheral vascular diseases	182	76 106	178	74 104	3	2 1	1	0 1
I74 Arterial embolism and thrombosis	8	1 7	8	1 7	0	0 0	0	0 0
I77 Other disorders of arteries and arterioles	24	10 14	24	10 14	0	0 0	0	0 0
I80 Phlebitis and thrombophlebitis	47	18 29	45	16 29	2	2 0	0	0 0
I81 Portal vein thrombosis	2	1 1	1	0 1	0	0 0	1	1 0
I82 Other venous embolism and thrombosis	6	3 3	6	3 3	0	0 0	0	0 0
I83 Varicose veins of lower extremities	3	2 1	2	1 1	1	1 0	0	0 0
I85 Oesophageal varices	7	4 3	6	3 3	1	1 0	0	0 0
I86 Varicose veins of other sites	1	1 0	1	1 0	0	0 0	0	0 0
I87 Other disorders of veins	5	1 4	4	1 3	1	0 1	0	0 0
I89 Other noninfective disorders of lymphatic vessels and lymph nodes	1	1 0	0	0 0	0	0 0	1	1 0
I95 Hypotension	12	5 7	12	5 7	0	0 0	0	0 0
I99 Other and unspecified disorders of circulatory system	4	1 3	4	1 3	0	0 0	0	0 0
J06 Acute upper respiratory infections of multiple and unspecified sites	2	0 2	2	0 2	0	0 0	0	0 0
J10 Influenza due to identified influenza virus	5	1 4	5	1 4	0	0 0	0	0 0
J11 Influenzavirus not identified	17	5 12	17	5 12	0	0 0	0	0 0
J12 Viral pneumonia, not elsewhere classified	4	3 1	3	2 1	1	1 0	0	0 0
J13 Pneumonia due to Streptococcus pneumoniae	5	3 2	5	3 2	0	0 0	0	0 0
J14 Pneumonia due to Haemophilus influenzae	2	1 1	2	1 1	0	0 0	0	0 0
J15 Bacterial pneumonia not elsewhere classified	66	32 34	63	31 32	3	1 2	0	0 0
J18 Pneumoniaorganism unspecified	1649	694 955	1593	666 927	40	22 18	16	6 10
J20 Acute bronchitis	2	1 1	2	1 1	0	0 0	0	0 0
J21 Acute bronchiolitis	2	1 1	2	1 1	0	0 0	0	0 0
J22 Unspecified acute lower respiratory infection	2	0 2	2	0 2	0	0 0	0	0 0
J34 Other disorders of nose and nasal sinuses	1	1 0	1	1 0	0	0 0	0	0 0
J38 Diseases of vocal cords and larynx not elsewhere class	3	2 1	3	2 1	0	0 0	0	0 0
J39 Other diseases of upper respiratory tract	5	0 5	5	0 5	0	0 0	0	0 0
J40 Bronchitisnot specified as acute or chronic	8	4 4	8	4 4	0	0 0	0	0 0



Table C-34 (continued). Resident Deaths by Cause, Sex, and Race<sup>1</sup>,  
Massachusetts: 2006

ICD Code Cause of Death	Totals			White			Black			Other		
	Totals			White			Black			Other		
	Tot	Male	Fem	Tot	Male	Fem	Tot	Male	Fem	Tot	Male	Fem
J42 Unspecified chronic bronchitis	9	4	5	9	4	5	0	0	0	0	0	0
J43 Emphysema	265	118	147	258	115	143	7	3	4	0	0	0
J44 Other chronic obstructive pulmonary disease	2169	916	1253	2115	883	1232	36	16	20	18	17	1
J45 Asthma	50	10	40	41	9	32	8	1	7	1	0	1
J46 Status asthmaticus	2	1	1	2	1	1	0	0	0	0	0	0
J47 Bronchiectasis	26	10	16	23	9	14	3	1	2	0	0	0
J61 Pneumoconiosis due to asbestos and other mineral fibres	9	9	0	9	9	0	0	0	0	0	0	0
J69 Pneumonitis due to solids and liquids	528	277	251	509	267	242	13	5	8	6	5	1
J80 Adult respiratory distress syndrome	24	11	13	21	10	11	2	1	1	1	0	1
J81 Pulmonary oedema	21	4	17	20	4	16	1	0	1	0	0	0
J82 Pulmonary eosinophilia, not elsewhere classified	4	0	4	4	0	4	0	0	0	0	0	0
J84 Other interstitial pulmonary diseases	382	199	183	369	193	176	5	1	4	8	5	3
J85 Abscess of lung and mediastinum	8	4	4	8	4	4	0	0	0	0	0	0
J86 Pyothorax	5	3	2	5	3	2	0	0	0	0	0	0
J90 Pleural effusionnot elsewhere classified	18	10	8	16	9	7	2	1	1	0	0	0
J93 Pneumothorax	10	5	5	8	5	3	1	0	1	1	0	1
J94 Other pleural conditions	1	0	1	1	0	1	0	0	0	0	0	0
J96 Respiratory failure not elsewhere classified	181	73	108	174	68	106	6	4	2	1	1	0
J98 Other respiratory disorders	108	45	63	105	45	60	3	0	3	0	0	0
K08 Other disorders of teeth and supporting structures	5	2	3	5	2	3	0	0	0	0	0	0
K11 Diseases of salivary glands	4	0	4	3	0	3	1	0	1	0	0	0
K20 Oesophagitis	5	2	3	5	2	3	0	0	0	0	0	0
K21 Gastro-oesophageal reflux disease	10	4	6	10	4	6	0	0	0	0	0	0
K22 Other diseases of oesophagus	33	14	19	29	12	17	3	2	1	1	0	1
K25 Gastric ulcer	13	3	10	13	3	10	0	0	0	0	0	0
K26 Duodenal ulcer	17	10	7	15	8	7	1	1	0	1	1	0
K27 Peptic ulcer site unspecified	13	6	7	12	5	7	0	0	0	1	1	0
K29 Gastritis and duodenitis	5	4	1	4	3	1	0	0	0	1	1	0
K31 Other diseases of stomach and duodenum	5	1	4	5	1	4	0	0	0	0	0	0
K35 Acute appendicitis	8	4	4	7	3	4	0	0	0	1	1	0
K37 Unspecified appendicitis	1	0	1	1	0	1	0	0	0	0	0	0
K40 Inguinal hernia	7	5	2	7	5	2	0	0	0	0	0	0
K42 Umbilical hernia	1	0	1	1	0	1	0	0	0	0	0	0
K43 Ventral hernia	4	1	3	4	1	3	0	0	0	0	0	0
K44 Diaphragmatic hernia	8	2	6	8	2	6	0	0	0	0	0	0
K46 Unspecified abdominal hernia	15	8	7	15	8	7	0	0	0	0	0	0
K50 Crohn's disease [regional enteritis]	16	4	12	16	4	12	0	0	0	0	0	0
K51 Ulcerative colitis	6	2	4	6	2	4	0	0	0	0	0	0
K52 Other noninfective gastroenteritis and colitis	83	29	54	83	29	54	0	0	0	0	0	0
K55 Vascular disorders of intestine	218	57	161	205	52	153	11	5	6	2	0	2
K56 Paralytic ileus and intestinal obstruction without hernia	133	39	94	131	38	93	1	0	1	1	1	0

Table C-34 (continued). Resident Deaths by Cause, Sex, and Race<sup>1</sup>,  
Massachusetts: 2006

ICD Code Cause of Death	Totals			White			Black			Other		
	Totals			White			Black			Other		
	Tot	Male	Fem	Tot	Male	Fem	Tot	Male	Fem	Tot	Male	Fem
K57 Diverticular disease of intestine	61	19	42	59	19	40	2	0	2	0	0	0
K59 Other functional intestinal disorders	14	8	6	13	7	6	1	1	0	0	0	0
K62 Other diseases of anus and rectum	7	1	6	7	1	6	0	0	0	0	0	0
K63 Other diseases of intestine	71	24	47	67	23	44	1	0	1	3	1	2
K65 Peritonitis	35	10	25	33	9	24	2	1	1	0	0	0
K66 Other disorders of peritoneum	6	5	1	4	3	1	2	2	0	0	0	0
K70 Alcoholic liver disease	155	116	39	146	110	36	8	5	3	1	1	0
K72 Hepatic failure not elsewhere classified	133	73	60	126	68	58	6	5	1	1	0	1
K73 Chronic hepatitis not elsewhere classified	1	0	1	0	0	0	1	0	1	0	0	0
K74 Fibrosis and cirrhosis of liver	351	221	130	336	210	126	11	8	3	4	3	1
K75 Other inflammatory liver diseases	20	8	12	16	6	10	3	1	2	1	1	0
K76 Other diseases of liver	133	93	40	120	87	33	10	4	6	3	2	1
K80 Cholelithiasis	14	5	9	13	4	9	0	0	0	1	1	0
K81 Cholecystitis	49	20	29	42	15	27	4	2	2	3	3	0
K82 Other diseases of gallbladder	7	4	3	7	4	3	0	0	0	0	0	0
K83 Other diseases of biliary tract	32	15	17	31	14	17	1	1	0	0	0	0
K85 Acute pancreatitis	70	35	35	65	33	32	5	2	3	0	0	0
K86 Other diseases of pancreas	12	4	8	12	4	8	0	0	0	0	0	0
K90 Intestinal malabsorption	5	1	4	5	1	4	0	0	0	0	0	0
K92 Other diseases of digestive system	235	113	122	225	107	118	8	5	3	2	1	1
L02 Cutaneous abscess furuncle and carbuncle	5	2	3	4	2	2	0	0	0	1	0	1
L03 Cellulitis	18	5	13	18	5	13	0	0	0	0	0	0
L08 Other local infections of skin and subcutaneous tissue	8	4	4	7	3	4	1	1	0	0	0	0
L10 Pemphigus	2	2	0	1	1	0	1	1	0	0	0	0
L12 Pemphigoid	2	2	0	2	2	0	0	0	0	0	0	0
L40 Psoriasis	1	0	1	1	0	1	0	0	0	0	0	0
L51 Erythema multiforme	3	0	3	3	0	3	0	0	0	0	0	0
L89 Decubitus ulcer	15	6	9	15	6	9	0	0	0	0	0	0
L93 Lupus erythematosus	2	0	2	2	0	2	0	0	0	0	0	0
L97 Ulcer of lower limb, not elsewhere classified	3	2	1	3	2	1	0	0	0	0	0	0
L98 Other disorders of skin and subcutaneous tissue NEC	6	1	5	6	1	5	0	0	0	0	0	0
M00 Pyogenic arthritis	6	3	3	6	3	3	0	0	0	0	0	0
M05 Seropositive rheumatoid arthritis	4	1	3	4	1	3	0	0	0	0	0	0
M06 Other rheumatoid arthritis	44	10	34	42	10	32	1	0	1	1	0	1
M10 Gout	5	4	1	5	4	1	0	0	0	0	0	0
M13 Other arthritis	5	1	4	5	1	4	0	0	0	0	0	0
M19 Other arthrosis	15	3	12	13	2	11	2	1	1	0	0	0
M30 Polyarteritis nodosa and related conditions	2	2	0	2	2	0	0	0	0	0	0	0
M31 Other necrotizing vasculopathies	14	6	8	13	6	7	0	0	0	1	0	1
M32 Systemic lupus erythematosus	10	1	9	10	1	9	0	0	0	0	0	0
M33 Dermatopolymyositis	7	2	5	7	2	5	0	0	0	0	0	0

Table C-34 (continued). Resident Deaths by Cause, Sex, and Race<sup>1</sup>,  
Massachusetts: 2006

ICD Code Cause of Death	Totals			White			Black			Other		
	Tot	Male	Fem	Tot	Male	Fem	Tot	Male	Fem	Tot	Male	Fem
M34 Systemic sclerosis	34	7	27	33	7	26	1	0	1	0	0	0
M35 Other systemic involvement of connective tissue	8	3	5	7	3	4	1	0	1	0	0	0
M40 Kyphosis and lordosis	4	0	4	4	0	4	0	0	0	0	0	0
M41 Scoliosis	4	0	4	4	0	4	0	0	0	0	0	0
M43 Other deforming dorsopathies	1	1	0	1	1	0	0	0	0	0	0	0
M45 Ankylosing spondylitis	2	1	1	2	1	1	0	0	0	0	0	0
M46 Other inflammatory spondylopathies	5	3	2	5	3	2	0	0	0	0	0	0
M48 Other spondylopathies	7	4	3	7	4	3	0	0	0	0	0	0
M51 Other intervertebral disc disorders	2	1	1	2	1	1	0	0	0	0	0	0
M60 Myositis	8	5	3	8	5	3	0	0	0	0	0	0
M62 Other disorders of muscle	17	13	4	16	12	4	1	1	0	0	0	0
M72 Fibroblastic disorders	7	3	4	7	3	4	0	0	0	0	0	0
M80 Osteoporosis with pathological fracture	12	0	12	11	0	11	1	0	1	0	0	0
M81 Osteoporosis without pathological fracture	13	1	12	12	1	11	0	0	0	1	0	1
M84 Disorders of continuity of bone	1	1	0	1	1	0	0	0	0	0	0	0
M86 Osteomyelitis	38	19	19	35	18	17	2	1	1	1	0	1
M88 Paget's disease of bone [osteitis deformans]	3	3	0	3	3	0	0	0	0	0	0	0
M89 Other disorders of bone	1	0	1	1	0	1	0	0	0	0	0	0
N03 Chronic nephritic syndrome	6	0	6	4	0	4	1	0	1	1	0	1
N04 Nephrotic syndrome	1	1	0	1	1	0	0	0	0	0	0	0
N05 Unspecified nephritic syndrome	1	1	0	1	1	0	0	0	0	0	0	0
N10 Acute tubulo-interstitial nephritis	2	1	1	2	1	1	0	0	0	0	0	0
N11 Chronic tubulo-interstitial nephritis	1	0	1	1	0	1	0	0	0	0	0	0
N12 Tubulo-interstitial nephritis not specified as acute or chronic	6	2	4	6	2	4	0	0	0	0	0	0
N13 Obstructive and reflux uropathy	9	5	4	9	5	4	0	0	0	0	0	0
N17 Acute renal failure	315	128	187	305	122	183	8	4	4	2	2	0
N18 Chronic renal failure	485	235	250	426	217	209	48	16	32	11	2	9
N19 Unspecified renal failure	582	289	293	544	269	275	33	17	16	5	3	2
N20 Calculus of kidney and ureter	4	1	3	4	1	3	0	0	0	0	0	0
N21 Calculus of lower urinary tract	1	1	0	1	1	0	0	0	0	0	0	0
N28 Other disorders of kidney and ureter NEC	21	12	9	21	12	9	0	0	0	0	0	0
N30 Cystitis	1	0	1	1	0	1	0	0	0	0	0	0
N31 Neuromuscular dysfunction of bladder NEC	3	2	1	3	2	1	0	0	0	0	0	0
N32 Other disorders of bladder	6	4	2	6	4	2	0	0	0	0	0	0
N39 Other disorders of urinary system	355	114	241	343	108	235	10	5	5	2	1	1
N40 Hyperplasia of prostate	6	6	0	6	6	0	0	0	0	0	0	0
N45 Orchitis and epididymitis	1	1	0	1	1	0	0	0	0	0	0	0
N49 Inflammatory disorders of male genital organs NEC	1	1	0	1	1	0	0	0	0	0	0	0
N63 Unspecified lump in breast	2	0	2	2	0	2	0	0	0	0	0	0
N70 Salpingitis and oophoritis	1	0	1	0	0	0	1	0	1	0	0	0
N73 Other female pelvic inflammatory diseases	1	0	1	1	0	1	0	0	1	0	0	0

Table C-34 (continued). Resident Deaths by Cause, Sex, and Race<sup>1</sup>,  
Massachusetts: 2006

ICD Code Cause of Death	Totals			White			Black			Other		
	Tot	Male	Fem	Tot	Male	Fem	Tot	Male	Fem	Tot	Male	Fem
N76 Other inflammation of vagina and vulva	1	0	1	0	0	0	1	0	1	0	0	0
N82 Fistulae Involving female genital tract	3	0	3	3	0	3	0	0	0	0	0	0
N93 Other abnormal uterine and vaginal bleeding	2	0	2	2	0	2	0	0	0	0	0	0
O00 Ectopic pregnancy	1	0	1	1	0	1	0	0	0	0	0	0
O62 Abnormalities of forces of labour	1	0	1	1	0	1	0	0	0	0	0	0
O75 Other complications of labour and delivery NEC	2	0	2	0	0	0	2	0	2	0	0	0
O88 Obstetric embolism	1	0	1	0	0	0	0	0	0	1	0	1
O90 Complications of the puerperium NEC	1	0	1	0	0	0	1	0	1	0	0	0
P00 Fetus and newborn affected maternal conditions that may be unrelated to present pregnancy	2	1	1	2	1	1	0	0	0	0	0	0
P01 Fetus and newborn affected by maternal complications of pregnancy	20	15	5	18	13	5	2	2	0	0	0	0
P02 Fetus and newborn affected by complications of placenta, cord and membranes	15	7	8	12	6	6	3	1	2	0	0	0
P03 Fetus and newborn affected by other complications of labour and delivery	3	1	2	2	0	2	1	1	0	0	0	0
P04 Fetus and newborn affected by noxious influences transmitted via placenta or breast milk	5	1	4	4	0	4	1	1	0	0	0	0
P05 Slow fetal growth and fetal malnutrition	1	0	1	0	0	0	1	0	1	0	0	0
P07 Disorders relating to short gestation and low birth weight	114	58	56	79	39	40	32	17	15	3	2	1
P20 Intrauterine hypoxia	6	3	3	5	3	2	1	0	1	0	0	0
P21 Birth asphyxia	4	1	3	2	1	1	2	0	2	0	0	0
P22 Respiratory distress of newborn	5	5	0	2	2	0	3	3	0	0	0	0
P25 Interstitial emphysema and related conditions originating in the perinatal period	2	2	0	2	2	0	0	0	0	0	0	0
P27 Chronic respiratory disease originating in the perinatal period	2	1	1	1	1	0	1	0	1	0	0	0
P28 Other respiratory conditions originating in the perinatal period	3	1	2	2	1	1	1	0	1	0	0	0
P29 Cardiovascular disorders originating in the perinatal period	11	5	6	10	5	5	0	0	0	1	0	1
P35 Congenital viral diseases	2	2	0	1	1	0	0	0	0	1	1	0
P36 Bacterial sepsis of newborn	6	3	3	6	3	3	0	0	0	0	0	0
P37 Other congenital infectious and parasitic diseases	3	2	1	3	2	1	0	0	0	0	0	0
P50 Fetal blood loss	1	1	0	1	1	0	0	0	0	0	0	0
P52 Intracranial nontraumatic haemorrhage of fetus and newborn	8	5	3	5	4	1	2	0	2	1	0	0
P54 Other neonatal haemorrhages	1	0	1	1	0	1	0	0	0	0	0	0
P61 Other perinatal haematological disorders	3	1	2	3	1	2	0	0	0	0	0	0
P77 Necrotizing enterocolitis of fetus and newborn	6	3	3	4	2	2	2	1	1	0	0	0
P83 Other conditions of integument specific to fetus and newborn	2	1	1	2	1	1	0	0	0	0	0	0
P91 Other disturbances of cerebral status of newborn	3	1	2	3	1	2	0	0	0	0	0	0
P96 Other conditions originating in the perinatal period	6	3	3	6	3	3	0	0	0	0	0	0
Q00 Anencephaly and similar malformations	3	2	1	2	1	1	1	1	0	0	0	0
Q02 Microcephaly	1	1	0	1	1	0	0	0	0	0	0	0
Q03 Congenital hydrocephalus	2	0	2	1	0	1	1	0	1	0	0	0
Q04 Other congenital malformations of brain	5	2	3	3	1	2	2	1	1	0	0	0
Q05 Spina bifida	1	1	0	1	1	0	0	0	0	0	0	0
Q20 Congenital malformations of cardiac chambers and connections	1	0	1	1	0	1	0	0	0	0	0	0
Q21 Congenital malformations of cardiac septa	7	5	2	7	5	2	0	0	0	0	0	0



Table C-34 (continued). Resident Deaths by Cause, Sex, and Race<sup>1</sup>,  
Massachusetts: 2006

ICD Code	Cause of Death	Totals			White			Black			Other		
		Tot	Male	Fem	Tot	Male	Fem	Tot	Male	Fem	Tot	Male	Fem
Q22	Congenital malformations of pulmonary and tricuspid valves	2	1	1	1	0	1	0	0	0	1	1	0
Q23	Congenital malformations of aortic and mitral valves	9	6	3	7	5	2	1	0	1	1	1	0
Q24	Other congenital malformations of heart	23	5	18	19	4	15	2	1	1	2	0	2
Q25	Congenital malformations of great arteries	4	3	1	3	2	1	0	0	0	1	1	0
Q27	Other congenital malformations of peripheral vascular system	5	1	4	5	1	4	0	0	0	0	0	0
Q28	Other congenital malformations of circulatory system	2	0	2	2	0	2	0	0	0	0	0	0
Q33	Congenital malformations of lung	4	0	4	4	0	4	0	0	0	0	0	0
Q34	Other congenital malformations of respiratory system	1	0	1	1	0	1	0	0	0	0	0	0
Q43	Other congenital malformations of intestine	1	1	0	1	1	0	0	0	0	0	0	0
Q44	Congenital malformations of gall bladder, bile ducts & liver	2	2	0	2	2	0	0	0	0	0	0	0
Q60	Renal agenesis and other reduction defects of kidney	1	1	0	1	1	0	0	0	0	0	0	0
Q61	Cystic kidney disease	3	2	1	3	2	1	0	0	0	0	0	0
Q64	Other congenital malformations of urinary system	1	1	0	1	1	0	0	0	0	0	0	0
Q68	Other congenital musculoskeletal deformities	1	1	0	1	1	0	0	0	0	0	0	0
Q78	Other osteochondrodysplasias	1	1	0	1	1	0	0	0	0	0	0	0
Q79	Congenital malformations of the musculoskel system NEC	3	2	1	2	1	1	1	1	0	0	0	0
Q81	Epidermolysis bullosa	1	1	0	1	1	0	0	0	0	0	0	0
Q85	Phakomatoses not elsewhere classified	6	3	3	6	3	3	0	0	0	0	0	0
Q87	Other specified congenital malformation syndromes affecting multiple systems	2	2	0	2	2	0	0	0	0	0	0	0
Q89	Other congenital malformations, not elsewhere classifie	8	3	5	6	3	3	1	0	1	1	0	1
Q90	Down's syndrome	14	7	7	13	6	7	1	1	0	0	0	0
Q91	Edwards' syndrome and Patau's syndrome	7	2	5	5	1	4	2	1	1	0	0	0
Q92	Other trisomies and partial trisomies of the autosomes	1	1	0	1	1	0	0	0	0	0	0	0
Q99	Other chromosome abnormalities not elsewhere classified	2	0	2	2	0	2	0	0	0	0	0	0
R00	Abnormalities of heart beat	2	0	2	2	0	2	0	0	0	0	0	0
R02	Gangrene not elsewhere classified	8	0	8	8	0	8	0	0	0	0	0	0
R04	Haemorrhage from respiratory passages	1	1	0	0	0	0	1	1	0	0	0	0
R06	Abnormalities of breathing	4	3	1	4	3	1	0	0	0	0	0	0
R09	Other symptoms and signs of involving the circulatory and respiratory systems	71	28	43	64	25	39	6	3	3	1	0	1
R13	Dysphagia	8	2	6	8	2	6	0	0	0	0	0	0
R18	Ascites	1	0	1	1	0	1	0	0	0	0	0	0
R19	Other symptoms & signs involving digestive system and abdomen	6	0	6	6	0	6	0	0	0	0	0	0
R31	Unspecified haematuria	1	1	0	1	1	0	0	0	0	0	0	0
R41	Other symptoms & signs involving cognitive function and awareness	1	0	1	1	0	1	0	0	0	0	0	0
R53	Malaise and fatigue	38	2	36	35	2	33	3	0	3	0	0	0
R54	Senility	22	2	20	22	2	20	0	0	0	0	0	0
R55	Syncope and collapse	3	1	2	3	1	2	0	0	0	0	0	0
R56	Convulsions not elsewhere classified	21	13	8	19	13	6	1	0	1	1	0	1
R57	Shock not elsewhere classified	22	14	8	20	14	6	2	0	2	0	0	0
R58	Haemorrhage not elsewhere classified	8	3	5	7	3	4	0	0	0	1	0	1
R62	Lack of expected normal physiological development	211	62	149	207	62	145	3	0	3	1	0	1

Table C-34 (continued). Resident Deaths by Cause, Sex, and Race<sup>1</sup>,  
Massachusetts: 2006

ICD Code Cause of Death	Totals			White			Black			Other		
	Tot	Male	Fem	Tot	Male	Fem	Tot	Male	Fem	Tot	Male	Fem
R63 Symptoms and signs concerning food and fluid intake	2	0	2	2	0	2	0	0	0	0	0	0
R64 Cachexia	10	1	9	10	1	9	0	0	0	0	0	0
R68 Other general symptoms and signs	35	12	23	34	11	23	1	1	0	0	0	0
R73 Elevated blood glucose level	1	1	0	1	1	0	0	0	0	0	0	0
R79 Other abnormal findings of blood chemistry	1	1	0	1	1	0	0	0	0	0	0	0
R90 Abnormal findings on diagnostic imaging of central nervous system	1	1	0	1	1	0	0	0	0	0	0	0
R91 Abnormal findings on diagnostic imaging of lung	8	3	5	8	3	5	0	0	0	0	0	0
R95 Sudden infant death syndrome	26	15	11	21	12	9	5	3	2	0	0	0
R96 Other sudden death, cause unknown	6	3	3	6	3	3	0	0	0	0	0	0
R99 Other ill-defined and unspecified causes of mortality	221	135	86	180	110	70	22	17	5	19	8	11
V02 Pedestrian injured in collision with two- or three-wheeled motor vehicle	1	1	0	1	1	0	0	0	0	0	0	0
V03 Pedestrian injured in collision with car, pickup truck, or van	17	8	9	13	8	5	3	0	3	1	0	1
V04 Pedestrian injured in collision with heavy transport vehicle or bus	4	1	3	4	1	3	0	0	0	0	0	0
V05 Pedestrian injured in collision with railway train or railway vehicle	6	5	1	4	3	1	2	2	0	0	0	0
V09 Pedestrian injured in other and unspecified transport accidents	52	30	22	44	25	19	5	4	1	3	1	2
V13 Pedal cyclist injured in collision with car, pickup truck, or van	3	3	0	3	3	0	0	0	0	0	0	0
V19 Pedal cyclist injured in other and unspecified transport accidents	4	4	0	4	4	0	0	0	0	0	0	0
V23 Motorcycle rider injured in collision with car, pickup truck, or van	13	12	1	13	12	1	0	0	0	0	0	0
V24 Motorcycle rider injured in collision with heavy transport vehicle or bus	2	2	0	1	1	0	1	1	0	0	0	0
V27 Motorcycle rider injured in collision with fixed or stationary object	11	11	0	11	11	0	0	0	0	0	0	0
V28 Motorcycle rider injured in noncollision transport accident	3	1	2	3	1	2	0	0	0	0	0	0
V29 Motorcycle rider injured in other and unspecified transport accidents	26	25	1	22	21	1	4	4	0	0	0	0
V43 Car occupant injured in collision with car, pickup truck, or van	12	7	5	12	7	5	0	0	0	0	0	0
V44 Car occupant injured in collision with heavy transport vehicle or bus	8	5	3	8	5	3	0	0	0	0	0	0
V47 Car occupant injured in collision with fixed or stationary object	28	19	9	27	18	9	1	1	0	0	0	0
V48 Car occupant injured in noncollision transport accident	11	7	4	9	5	4	0	0	0	2	2	0
V49 Car occupant injured in other and unspecified transport accidents	14	9	5	12	7	5	1	1	0	1	1	0
V53 Occupant of pickup truck or van injured in collision with car, pickup truck, or van	2	1	1	2	1	1	0	0	0	0	0	0
V54 Occupant of pickup truck or van injured in collision with heavy transport vehicle or bus	3	1	2	3	1	2	0	0	0	0	0	0
V57 Occupant of pickup truck or van injured in collision with fixed or stationary object	2	2	0	2	2	0	0	0	0	0	0	0
V58 Occupant of pickup truck or van injured in noncollision transport accident	1	1	0	1	1	0	0	0	0	0	0	0
V59 Occupant of pickup truck or van injured in other and unspecified transport accidents	1	1	0	1	1	0	0	0	0	0	0	0
V69 Occupant of heavy transport vehicle injured in other and unspecified transport accidents	1	1	0	1	1	0	0	0	0	0	0	0
V77 Bus occupant injured in collision with fixed or stationary object	1	0	1	1	0	1	0	0	0	0	0	0
V80 Animal-rider or occupant of animal-drawn vehicle injured in transport accident	1	0	1	1	0	1	0	0	0	0	0	0
V81 Occupant of railway train or railway vehicle injured in transport accident	1	1	0	1	1	0	0	0	0	0	0	0
V84 Occupant of special vehicle mainly used in agriculture Injured in transport accident	1	1	0	1	1	0	0	0	0	0	0	0
V85 Occupant of special construction vehicle injured in transport accident	1	1	0	1	1	0	0	0	0	0	0	0
V86 Occupant of special all-terrain or other motor vehicle designed primarily for off-road use, Injured in transport accident	9	9	0	9	9	0	0	0	0	0	0	0
V87 Traffic accident of specified type but victim's mode of transport unknown	24	16	8	22	14	8	2	2	0	0	0	0

Table C-34 (continued). Resident Deaths by Cause, Sex, and Race<sup>1</sup>,  
Massachusetts: 2006

ICD Code Cause of Death	Totals			White			Black			Other		
	Tot	Male	Fem	Tot	Male	Fem	Tot	Male	Fem	Tot	Male	Fem
V88 Nontraffic accident of specified type but victim's mode of transport unknown	8	5	3	7	4	3	1	1	0	0	0	0
V89 Motor- or nonmotor-vehicle accident, type of vehicle unspecified	215	153	62	193	136	57	17	14	3	5	3	2
V90 Accident to watercraft causing drowning and submersion	2	2	0	2	2	0	0	0	0	0	0	0
V91 Accident to watercraft causing other injury	1	1	0	1	1	0	0	0	0	0	0	0
V92 Water-transport-related drowning and submersion without accident to watercraft	1	1	0	1	1	0	0	0	0	0	0	0
V95 Accident to powered aircraft causing injury to occupant	2	2	0	2	2	0	0	0	0	0	0	0
V98 Other specified transport accidents	1	1	0	1	1	0	0	0	0	0	0	0
W00 Fall on same level Involving ice and snow	2	2	0	2	2	0	0	0	0	0	0	0
W01 Fall on same level from slipping, tripping, and stumbling	12	5	7	12	5	7	0	0	0	0	0	0
W02 Fall involving ice skates, skis, roller skates, or skateboards	2	2	0	2	2	0	0	0	0	0	0	0
W05 Fall involving wheelchair	6	2	4	5	1	4	1	1	0	0	0	0
W06 Fall involving bed	15	3	12	15	3	12	0	0	0	0	0	0
W07 Fall involving chair	3	0	3	3	0	3	0	0	0	0	0	0
W08 Fall involving other furniture	2	0	2	1	0	1	1	0	1	0	0	0
W10 Fall on and from stairs and steps	71	39	32	68	38	30	1	1	0	2	0	2
W11 Fall on and from ladder	7	7	0	7	7	0	0	0	0	0	0	0
W12 Fall on and from scaffolding	1	1	0	1	1	0	0	0	0	0	0	0
W13 Fall from, out of, or through building or structure	18	14	4	17	13	4	0	0	0	1	1	0
W16 Diving or jumping into water causing injury other than drowning or submersion	1	1	0	1	1	0	0	0	0	0	0	0
W17 Other fall from one level to another	9	5	4	8	5	3	1	0	1	0	0	0
W18 Other fall on same level	55	26	29	53	24	29	0	0	0	2	2	0
W19 Unspecified fall	202	87	115	197	86	111	2	0	2	3	1	2
W20 Struck by thrown, projected, or falling object	13	10	3	12	9	3	1	1	0	0	0	0
W22 Striking against or struck by other objects	1	1	0	1	1	0	0	0	0	0	0	0
W23 Caught, crushed, jammed, or pinched in or between objects	3	2	1	3	2	1	0	0	0	0	0	0
W24 Contact with lifting and transmission devices, not elsewhere classified	2	2	0	2	2	0	0	0	0	0	0	0
W25 Contact with sharp glass	1	1	0	1	1	0	0	0	0	0	0	0
W28 Contact with powered lawn mower	1	1	0	1	1	0	0	0	0	0	0	0
W31 Contact with other and unspecified machinery	3	3	0	3	3	0	0	0	0	0	0	0
W34 Discharge from other and unspecified firearms	1	1	0	1	1	0	0	0	0	0	0	0
W36 Explosion and rupture of gas cylinder	1	0	1	1	0	1	0	0	0	0	0	0
W54 Bitten or struck by dog	1	1	0	1	1	0	0	0	0	0	0	0
W55 Bitten or struck by other mammals	1	1	0	1	1	0	0	0	0	0	0	0
W65 Drowning and submersion while in bathtub	7	2	5	5	2	3	0	0	0	2	0	2
W67 Drowning and submersion while in swimming pool	6	4	2	5	3	2	1	1	0	0	0	0
W69 Drowning and submersion while in natural water	21	16	5	18	14	4	3	2	1	0	0	0
W70 Drowning and submersion following fall into natural water	2	2	0	1	1	0	1	1	0	0	0	0
W73 Other specified drowning and submersion	3	3	0	3	3	0	0	0	0	0	0	0
W74 Unspecified drowning and submersion	6	5	1	6	5	1	0	0	0	0	0	0
W75 Accidental suffocation and strangulation in bed	2	1	1	1	0	1	1	1	0	0	0	0
W76 Other accidental hanging and strangulation	4	2	2	3	2	1	0	0	0	1	0	1



Table C-34 (continued). Resident Deaths by Cause, Sex, and Race<sup>1</sup>,  
Massachusetts: 2006

ICD Code Cause of Death	Totals			White			Black			Other		
	Tot	Male	Fem	Tot	Male	Fem	Tot	Male	Fem	Tot	Male	Fem
W78 Inhalation of gastric contents	11	4	7	11	4	7	0	0	0	0	0	0
W79 Inhalation and ingestion of food causing obstruction of respiratory tract	15	10	5	15	10	5	0	0	0	0	0	0
W80 Inhalation and ingestion of other objects causing obstruction of respiratory tract	67	38	29	65	37	28	2	1	1	0	0	0
W83 Other specified threats to breathing	3	3	0	3	3	0	0	0	0	0	0	0
W84 Unspecified threat to breathing	7	5	2	5	4	1	2	1	1	0	0	0
W86 Exposure to other specified electric current	4	4	0	3	3	0	1	1	0	0	0	0
W87 Exposure to unspecified electric current	3	3	0	3	3	0	0	0	0	0	0	0
X00 Exposure to uncontrolled fire in building or structure	25	12	13	24	12	12	1	0	1	0	0	0
X01 Exposure to uncontrolled fire, not in building or structure	2	2	0	1	1	0	1	1	0	0	0	0
X06 Exposure to ignition or melting of other clothing and apparel	1	1	0	1	1	0	0	0	0	0	0	0
X11 Contact with hot tap water	1	1	0	1	1	0	0	0	0	0	0	0
X19 Contact with other and unspecified heat and hot substances	1	1	0	1	1	0	0	0	0	0	0	0
X23 Contact with hornets, wasps, and bees	1	1	0	1	1	0	0	0	0	0	0	0
X30 Exposure to excessive natural heat	5	2	3	4	2	2	0	0	0	1	0	1
X31 Exposure to excessive natural cold	7	5	2	5	4	1	2	1	1	0	0	0
X39 Exposure to other and unspecified forces of nature	1	1	0	1	1	0	0	0	0	0	0	0
X40 Accidental poisoning by and exposure to nonopioid analgesics, antipyretics, and antirheumatics	2	1	1	2	1	1	0	0	0	0	0	0
X41 Accidental poisoning by and exposure to antiepileptic, sedative-hypnotic, antiparkinsonism, and psychotropic drugs, not elsewhere classified	41	20	21	39	19	20	2	1	1	0	0	0
X42 Accidental poisoning by and exposure to narcotics and psychodysleptics [hallucinogens], not elsewhere classified	598	452	146	545	414	131	49	35	14	4	3	1
X44 Accidental poisoning by and exposure to other and unspecified drugs, medicaments, and biological substances	160	91	69	154	88	66	6	3	3	0	0	0
X45 Accidental poisoning by and exposure to alcohol	4	2	2	3	2	1	1	0	1	0	0	0
X46 Accidental poisoning by and exposure to organic solvents and halogenated hydrocarbons and their vapors	2	2	0	2	2	0	0	0	0	0	0	0
X47 Accidental poisoning by and exposure to other gases and vapors	8	8	0	6	6	0	2	2	0	0	0	0
X49 Accidental poisoning by and exposure to other and unspecified chemicals and noxious substances	6	4	2	6	4	2	0	0	0	0	0	0
X53 Lack of food	1	1	0	1	1	0	0	0	0	0	0	0
X58 Exposure to other specified factors	5	4	1	4	3	1	1	1	0	0	0	0
X59 Exposure to unspecified factor	188	58	130	183	56	127	3	2	1	2	0	2
X60 Intentional self-poisoning (suicide) by and exposure to nonopioid analgesics, antipyretics, and antirheumatics	2	2	0	2	2	0	0	0	0	0	0	0
X61 Intentional self-poisoning (suicide) by and exposure to antiepileptic, sedative-hypnotic, antiparkinsonism, and psychotropic drugs, not elsewhere classified	34	11	23	34	11	23	0	0	0	0	0	0
X62 Intentional self-poisoning (suicide) by and exposure to narcotics and psychodysleptics [hallucinogens], not elsewhere classified	13	5	8	13	5	8	0	0	0	0	0	0
X64 Intentional self-poisoning (suicide) by and exposure to other and unspecified drugs, medicaments, and biological substances	41	19	22	39	18	21	2	1	1	0	0	0



Table C-34 (continued). Resident Deaths by Cause, Sex, and Race<sup>1</sup>,  
Massachusetts: 2006

ICD Code Cause of Death	Totals			White			Black			Other		
	Tot		Fem	Tot		Fem	Tot		Fem	Tot		Fem
	Male	Female		Male	Female		Male	Female		Male	Female	
X67 Intentional self-poisoning (suicide) by and exposure to other gases and vapors	21	13	8	20	12	8	1	1	0	0	0	0
X69 Intentional self-poisoning (suicide) by and exposure to other and unspecified chemicals and noxious substances	3	1	2	3	1	2	0	0	0	0	0	0
X70 Intentional self harm (suicide) by hanging, strangulation, and suffocation	166	135	31	152	125	27	5	5	0	9	5	4
X71 Intentional self harm (suicide) by drowning and submersion	13	8	5	12	8	4	0	0	0	1	0	1
X72 Intentional self harm (suicide) by handgun discharge	1	0	1	1	0	1	0	0	0	0	0	0
X73 Intentional self harm (suicide) by rifle, shotgun, and larger firearm discharge	17	16	1	17	16	1	0	0	0	0	0	0
X74 Intentional self harm (suicide) by other and unspecified firearm discharge	80	69	11	73	63	10	6	5	1	1	1	0
X76 Intentional self harm (suicide) by smoke, fire, and flames	2	1	1	1	1	0	1	0	1	0	0	0
X78 Intentional self harm (suicide) by sharp object	13	9	4	13	9	4	0	0	0	0	0	0
X80 Intentional self harm (suicide) by jumping from a high place	16	10	6	12	9	3	2	0	2	2	1	1
X81 Intentional self harm (suicide) by jumping or lying before moving object	10	9	1	9	8	1	0	0	0	1	1	0
X83 Intentional self harm (suicide) by other specified means	3	2	1	2	2	0	0	0	0	1	0	1
X84 Intentional self harm (suicide) by unspecified means	2	2	0	2	2	0	0	0	0	0	0	0
X91 Assault (homicide) by hanging, strangulation, and suffocation	9	2	7	7	2	5	1	0	1	1	0	1
X93 Assault (homicide) by handgun discharge	1	1	0	0	0	0	0	0	0	1	1	0
X94 Assault (homicide) by rifle, shotgun, and larger firearm discharge	3	3	0	3	3	0	0	0	0	0	0	0
X95 Assault (homicide) by other and unspecified firearm discharge	101	92	9	33	28	5	64	61	3	4	3	1
X97 Assault (homicide) by smoke, fire, and flames	1	0	1	0	0	0	1	0	1	0	0	0
X99 Assault (homicide) by sharp object	40	28	12	30	21	9	10	7	3	0	0	0
Y00 Assault (homicide) by blunt object	2	1	1	2	1	1	0	0	0	0	0	0
Y04 Assault (homicide) by bodily force	11	7	4	8	6	2	3	1	2	0	0	0
Y07 Other maltreatment syndromes	1	1	0	1	1	0	0	0	0	0	0	0
Y08 Assault (homicide) by other specified means	4	3	1	4	3	1	0	0	0	0	0	0
Y09 Assault (homicide) by unspecified means	8	5	3	6	3	3	2	2	0	0	0	0
Y10 Poisoning by and exposure to nonopioid analgesics, antipyretics, and antirheumatics, undetermined intent	4	1	3	2	0	2	2	1	1	0	0	0
Y11 Poisoning by and exposure to antiepileptic, sedative-hypnotic, antiparkinsonism, and psychotropic drugs, not elsewhere classified, undetermined intent	9	6	3	9	6	3	0	0	0	0	0	0
Y12 Poisoning by and exposure to narcotics and psychodysleptics [hallucinogens], not elsewhere classified, undetermined intent	17	9	8	17	9	8	0	0	0	0	0	0
Y14 Poisoning by and exposure to other and unspecified drugs, medicaments, and biological substances, undetermined intent	20	6	14	18	6	12	2	0	2	0	0	0
Y16 Poisoning by and exposure to organic solvents and halogenated hydrocarbons and their vapors, undetermined intent	1	1	0	1	1	0	0	0	0	0	0	0
Y17 Poisoning by and exposure to other gases and vapors, undetermined intent	3	3	0	3	3	0	0	0	0	0	0	0
Y20 Hanging, strangulation, and suffocation, undetermined intent	1	0	1	1	0	1	0	0	0	0	0	0
Y21 Drowning and submersion, undetermined intent	9	9	0	7	7	0	2	2	0	0	0	0
Y26 Exposure to smoke, fire, and flames, undetermined intent	1	1	0	1	1	0	0	0	0	0	0	0
Y28 Contact with sharp object, undetermined intent	1	0	1	1	0	1	0	0	0	0	0	0
Y30 Falling, jumping, or pushed from a high place, undetermined intent	2	2	0	1	1	0	1	1	0	0	0	0

Table C-34 (continued). Resident Deaths by Cause, Sex, and Race<sup>1</sup>,  
Massachusetts: 2006

ICD Code Cause of Death	Totals		White		Black		Other	
	Tot	Male	Tot	Male	Tot	Male	Tot	Male
Y31 Falling, lying, or running before or into moving object, undetermined Intent	1	1	0	1	0	0	0	0
Y33 Other specified events, undetermined intent	2	1	1	1	0	0	0	0
Y34 Unspecified event, undetermined Intent	8	5	3	7	1	1	0	0
Y35 Legal intervention	3	3	0	2	1	1	0	0
Y43 Primarily systemic agents	1	0	1	1	0	0	0	0
Y46 Antiepileptics and antiparkinsonism drugs	1	1	0	0	1	1	0	0
Y57 Other and unspecified drugs and medicaments	3	0	3	0	0	0	0	0
Y82 Other and unspecified medical devices associated with adverse incidents	1	0	1	0	0	0	0	0
Y83 Surgical operation and other surgical procedures as the cause of abnormal reaction of the patient, or of later complication, without mention of misadventure at the time of the procedure	23	10	13	22	1	0	0	0
Y84 Other medical procedures as the cause of abnormal reaction of the patient, or of later complication, without mention of misadventure at the time of the procedure	6	3	3	4	1	1	1	0
Y85 Sequelae of transport accidents	9	8	1	8	1	1	0	0
Y86 Sequelae of other accidents	14	7	7	14	7	0	0	0
Y87 Sequelae of intentional self harm, assault, and events of undetermined Intent	3	3	0	2	1	1	0	0
Y88 Sequelae with surgical and medical care as external cause	2	1	1	2	1	0	0	0

1. Hispanic ethnicity is not treated as mutually exclusive in this chart.

## INFANT & NEONATAL DEATHS





## SECTION D

### INFANT AND FETAL DEATHS

The total number of resident infant deaths (deaths of children less than 1 year of age) decreased by 5.6% in Massachusetts from 391 in 2005 to 369 in 2006. The rate of infant deaths also decreased -- from 5.1 deaths per 1,000 live births in 2005 to 4.8 deaths per 1,000 live births in 2006. As with live births and other deaths, all Massachusetts resident infant deaths are included regardless of the state in which they occurred. Neonatal deaths (deaths of infants under 28 days of age) fell slightly from 282 in 2005 to 279 in 2006, a decrease of 1.1%. The rate of neonatal deaths declined from 3.7 to 3.6 between 2005 and 2006. The total number of fetal deaths to Massachusetts residents decreased by 33 between 2005 to 2006, going from 421 to 388. Over these years the fetal death rate fell from 5.5 to 5.0.

#### INFANT DEATHS BY RACE

Beginning with the publication of 1989 data, several changes occurred in the method of calculating infant mortality rates (IMRs) by race and ethnicity. These changes affect only the calculation of infant mortality rates by race and ethnicity; all other data presented in this publication are comparable to information from previous years. These changes are the result of new federal recommendations for analyzing birth information, including infant mortality data, and the implementation of the new Massachusetts Standard Certificate of Death in 1989.

Infants born to Black non-Hispanic mothers continue to have the highest infant mortality rates. The IMR for Black non-Hispanics in 2006 was 11.1 deaths per 1,000 live births. This represents an increase of 1.7 (18.1%) from the 2005 rate, and it is over double the IMR for White non-Hispanic infants.

In 2006, the IMR for Hispanics decreased to 5.9 deaths per 1,000 live births from 7.7 deaths per 1,000 live births in 2005. This change is a 23.3% decrease. The mortality rate of infants born to Hispanic mothers is more similar to the experience of infants born to White non-Hispanic mothers than to Black non-Hispanic mothers. The 2006 IMR of 5.9 for Hispanic infants is 143.9% of the White non-Hispanic rate and 53.1% of the Black non-Hispanic rate.

Asian mothers had the lowest rates of infant mortality compared to the other race/ethnicity groups. This is consistent with prior years with the exception of 1995 and 2000, when the rate rose above that of White non-Hispanics. In 2006, the Asian IMR was 1.8 deaths per 1,000 live births. However, caution should be used when interpreting this rate since it is based on a small number (10) of deaths.

#### INFANT DEATHS BY CAUSE

The causes classified as "P00-P96, Certain conditions originating in the perinatal period" (medical conditions arising from approximately 28 weeks gestation to 28 days of age) constitute the leading cause of death for White non-Hispanic, Black non-Hispanic, Asian

non-Hispanic and Hispanic infants. Congenital anomalies represented the second leading cause of death among White non-Hispanics and Asian non-Hispanics while "Symptoms, signs, and ill-defined conditions" was second for Black non-Hispanics and Hispanics.

The overall leading causes of infant death include "Certain conditions originating in the perinatal period" (232 deaths) and congenital anomalies (52 deaths), which underwent a 3.5% increase and a 24.6% decrease, respectively, from 2005. Other causes of infant death included: unintentional injuries (9 deaths), and homicide (2 deaths). There were 5 more deaths from SIDS in 2006 than there were in 2005, representing a 23.8% increase. The number of homicide deaths (2) has remained relatively constant since 1994.

SIDS remains the leading cause of death in the post neonatal period (28-364 days), while "Certain conditions originating in the perinatal period" was the leading cause in the neonatal period.

#### NEONATAL AND POST NEONATAL MORTALITY RATES

The neonatal mortality rate was 3.6 deaths per 1,000 live births in 2006. Among White, non-Hispanic mothers, the neonatal mortality rate increased (6.5%), from 3.1 in 2005 to 3.3 in 2006. During this same time period, the rate increased by 24.2% among Black non-Hispanic mothers (from 6.6 in 2005 to 8.2 in 2006) and decreased among Hispanic mothers by 32.8% going from 5.8 to 3.9. Among Asians, the number of neonatal deaths decreased from 11 to 7 between 2005 and 2006, with the rates falling from 2.1 to 1.3. These rates should be interpreted cautiously since they are based on very few deaths.

The overall post neonatal mortality rate, representing the number of deaths of infants between 28 and 364 days of age per 1,000 live births, decreased between 2005 and 2006, falling from 1.4 to 1.2. The post neonatal mortality rate among infants of White non-Hispanic mothers fell from 1.2 deaths per 1,000 live births in 2005 to 0.9 in 2006. Among infants of Black non-Hispanic mothers, the post-neonatal mortality rate increased between 2005 and 2006, from 2.8 to 2.9 deaths per 1,000 births; a 3.6% increase. The rate of post neonatal deaths among Hispanics remained constant at 2.0. The number of post neonatal deaths among Asians went from 7 to 3 between 2005 and 2006.

DEFINITIONS IMPORTANT FOR THIS SECTION INCLUDE:

INFANT DEATH

Death of a child whose age is less than one year (365 days).

NEONATAL DEATH

Death of a child whose age is less than 28 days.

POST NEONATAL DEATH

Death of a child whose age is at least 28 days, but less than one year.

RATES IMPORTANT FOR THIS SECTION INCLUDE:

INFANT MORTALITY RATE (IMR)	$\frac{\text{\# of Resident Deaths at Less than 1 Year of Age} \times 1,000}{\text{Total Resident Live Births in the Same Year}}$
NEONATAL MORTALITY RATE (NMR)	$\frac{\text{\# of Resident Deaths at Less than 28 Days of Age} \times 1,000}{\text{Total Resident Live Births in the Same Year}}$
POST NEONATAL MORTALITY RATE (PNMR)	$\frac{\text{\# of Resident Deaths at Least 28 Days of Age but <365 Days of Age} \times 1,000}{\text{Total Resident Live Births in the Same Year}}$
FETAL MORTALITY RATE	$\frac{\text{\# of Fetal Deaths}}{\text{\# of Fetal Deaths Plus Live Births in the Same Year}} \times 1,000$
FETO-INFANT MORTALITY RATE	$\frac{\text{\# of Fetal Deaths} + \text{\# of Infant Deaths}}{\text{\# of Fetal Deaths Plus Live Births in the Same Year}} \times 1,000$

Figure D-1. Infant Mortality Rates by Race<sup>1</sup>, Massachusetts: 1980-2006

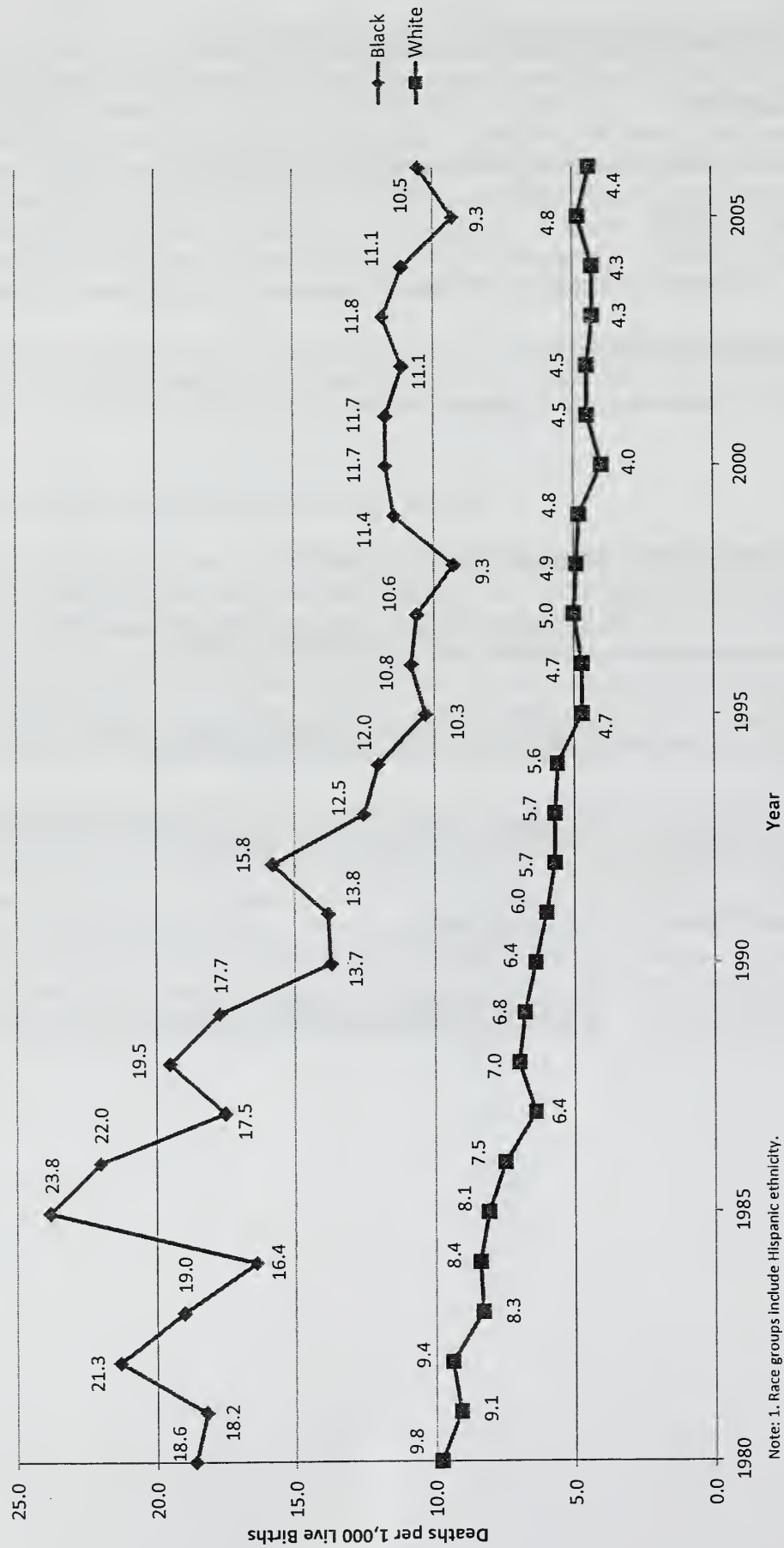
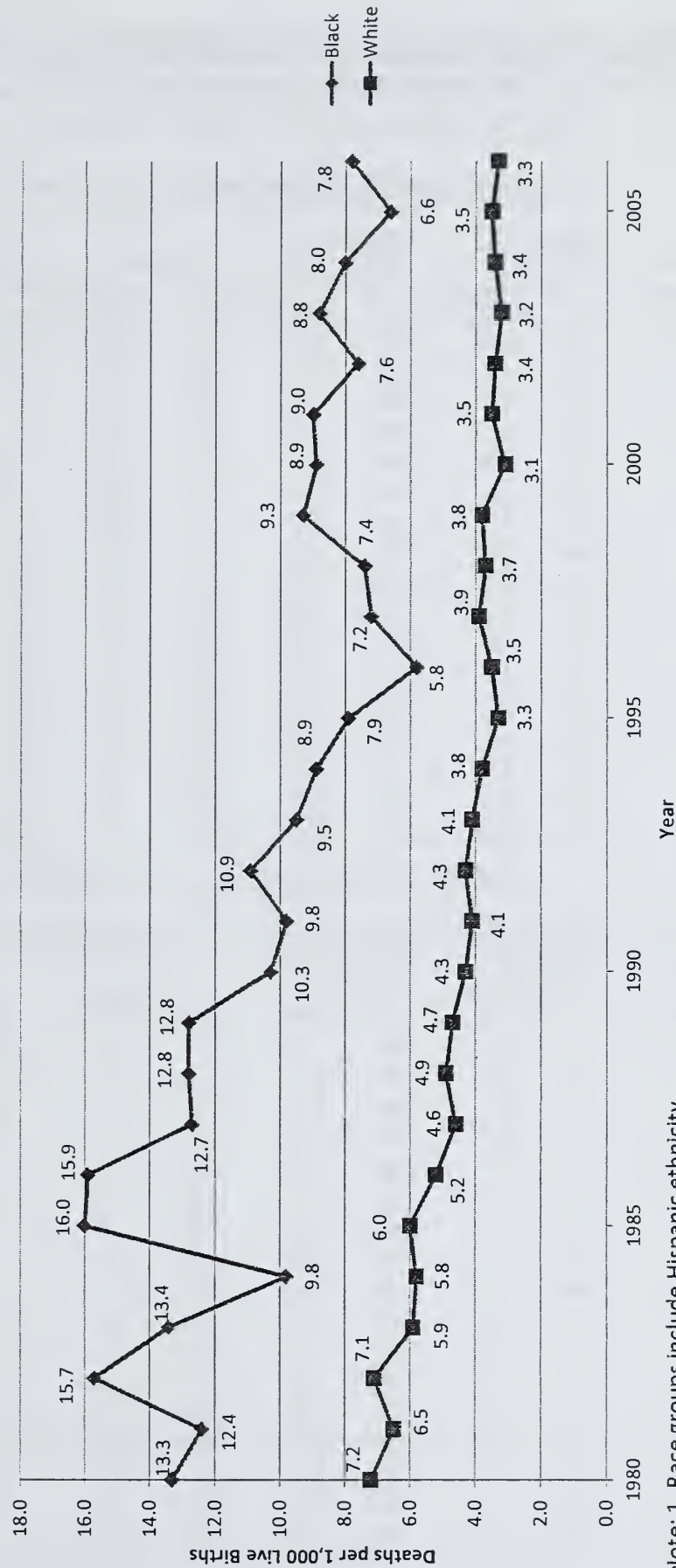




Figure D-2. Neonatal Mortality Rates by Race<sup>1</sup>, Massachusetts: 1980-2006



Note: 1. Race groups include Hispanic ethnicity

**Table D-1. Trends in Infant, Neonatal, and Post Neonatal Mortality by Race and Hispanic Ethnicity, Massachusetts: 1990-2006**

**INFANT MORTALITY (less than one year of age)**

Year	State Total <sup>1</sup>		White non-Hispanic		Black non-Hispanic		Hispanic		Asian		Other <sup>2</sup>	
	n	Rate <sup>3</sup>	n	Rate <sup>3</sup>	n	Rate <sup>3</sup>	n	Rate <sup>3</sup>	n	Rate <sup>3</sup>	n	Rate <sup>3</sup>
1990	649	7.0	442	6.1	98	13.7	77	9.1	24	7.0	8	9.5
1991	577	6.5	381	5.5	101	15.0	80	9.4	14	4.2	1	— <sup>4</sup>
1992	569	6.5	371	5.5	110	16.4	67	7.9	16	4.9	5	5.1
1993	523	6.2	346	5.3	84	13.1	77	9.3	13	3.9	3	— <sup>4</sup>
1994	499	6.0	343	5.3	79	12.6	64	7.6	8	2.4	5	5.3
1995	419	5.1	275	4.4	65	11.1	58	7.2	19	5.5	2	— <sup>4</sup>
1996	403	5.0	289	4.7	63	11.4	40	5.1	8	2.2	2	— <sup>4</sup>
1997	425	5.3	294	4.8	64	11.7	55	6.7	10	2.6	2	— <sup>4</sup>
1998	414	5.1	287	4.6	59	10.6	58	6.7	10	2.7	0	0.0
1999	418	5.2	285	4.7	72	12.3	49	5.5	8	1.9	4	— <sup>4</sup>
2000	377	4.6	232	3.8	74	12.8	48	5.2	19	4.1	4	— <sup>4</sup>
2001	407	5.0	245	4.1	71	12.1	69	7.3	15	3.1	7	4.1
2002	397	4.9	239	4.1	69	11.6	67	7.0	16	3.0	6	3.8
2003	383	4.8	235	4.1	75	12.7	55	5.6	14	2.7	4	— <sup>4</sup>
2004	376	4.8	210	3.8	70	11.5	75	7.6	15	2.7	6	3.5
2005	391	5.1	230	4.3	57	9.4	78	7.7	18	3.4	8	4.3
2006	369	4.8	220	4.1	72	11.1	63	5.9	10	1.8	3	— <sup>4</sup>

**NEONATAL MORTALITY (birth to 27 days)**

Year	State Total <sup>1</sup>		White non-Hispanic		Black non-Hispanic		Hispanic		Asian		Other <sup>2</sup>	
	n	Rate <sup>3</sup>	n	Rate <sup>3</sup>	n	Rate <sup>3</sup>	n	Rate <sup>3</sup>	n	Rate <sup>3</sup>	n	Rate <sup>3</sup>
1990	446	4.8	298	4.1	75	10.5	49	5.8	19	5.5	5	5.5
1991	401	4.5	266	3.9	72	10.7	53	6.2	10	3.0	0	0.0
1992	415	4.8	274	4.0	76	11.4	51	6.0	10	3.0	4	— <sup>4</sup>
1993	375	4.4	245	3.7	64	10.0	55	6.7	9	2.7	2	— <sup>4</sup>
1994	349	4.2	240	3.7	58	9.3	40	4.7	7	2.1	4	— <sup>4</sup>
1995	298	3.6	198	3.1	50	8.5	39	4.8	10	2.9	1	— <sup>4</sup>
1996	290	3.6	222	3.6	34	6.2	27	3.5	5	1.4	1	— <sup>4</sup>
1997	323	4.0	228	3.7	44	8.0	43	5.2	7	1.8	1	— <sup>4</sup>
1998	315	3.9	218	3.5	47	8.5	43	5.0	7	1.9	0	0.0
1999	332	4.1	226	3.7	58	9.9	39	4.4	5	1.2	4	— <sup>4</sup>
2000	288	3.5	177	2.9	57	9.9	37	4.0	14	3.0	3	— <sup>4</sup>
2001	308	3.8	190	3.2	56	9.5	49	5.2	10	2.1	3	— <sup>4</sup>
2002	299	3.7	185	3.2	49	8.2	50	5.2	13	2.4	2	— <sup>4</sup>
2003	285	3.6	179	3.1	56	9.5	38	3.9	10	1.9	2	— <sup>4</sup>
2004	291	3.7	167	3.0	51	8.4	57	5.8	12	2.2	4	— <sup>4</sup>
2005	282	3.7	168	3.1	40	6.6	57	5.8	11	2.1	5	2.7
2006	279	3.6	173	3.3	53	8.2	42	3.9	7	1.3	3	— <sup>4</sup>

Table D-1 (continued). Trends in Infant, Neonatal, and Post Neonatal Mortality by Race and Hispanic Ethnicity, Massachusetts: 1990-2006

POST NEONATAL MORTALITY (28-364 days)

Year	State Total <sup>1</sup>		White non-Hispanic		Black non-Hispanic		Hispanic		Asian		Other <sup>2</sup>	
	n	Rate <sup>3</sup>	n	Rate <sup>3</sup>	n	Rate <sup>3</sup>	n	Rate <sup>3</sup>	n	Rate <sup>3</sup>	n	Rate <sup>3</sup>
1990	203	2.2	144	2.0	23	3.2	28	3.3	5	1.5	3	— <sup>4</sup>
1991	176	2.0	115	1.7	29	4.3	27	3.2	4	— <sup>4</sup>	1	— <sup>4</sup>
1992	154	1.8	97	1.4	34	5.1	16	1.9	6	1.8	1	— <sup>4</sup>
1993	148	1.7	101	1.5	20	3.1	22	2.7	4	— <sup>4</sup>	1	— <sup>4</sup>
1994	150	1.8	103	1.6	21	3.3	24	2.8	1	— <sup>4</sup>	1	— <sup>4</sup>
1995	121	1.5	77	1.2	15	2.6	19	2.3	9	2.6	1	— <sup>4</sup>
1996	113	1.4	67	1.1	29	5.3	13	1.7	3	— <sup>4</sup>	1	— <sup>4</sup>
1997	102	1.3	66	1.1	20	3.7	12	1.5	3	— <sup>4</sup>	1	— <sup>4</sup>
1998	99	1.2	69	1.1	12	2.2	15	1.7	3	— <sup>4</sup>	0	0.0
1999	86	1.1	59	1.0	14	2.4	10	1.1	3	— <sup>4</sup>	0	0.0
2000	89	1.1	55	0.9	17	2.9	11	1.2	5	1.1	1	— <sup>4</sup>
2001	99	1.2	55	0.9	15	2.6	20	2.1	5	1.0	4	— <sup>4</sup>
2002	98	1.2	54	0.9	20	3.4	17	1.8	3	— <sup>4</sup>	4	— <sup>4</sup>
2003	98	1.2	56	1.0	19	3.2	17	1.7	4	— <sup>4</sup>	2	— <sup>4</sup>
2004	85	1.1	43	0.8	19	3.1	18	1.8	3	— <sup>4</sup>	2	— <sup>4</sup>
2005	109	1.4	62	1.2	17	2.8	20	2.0	7	1.3	3	— <sup>4</sup>
2006	90	1.2	47	0.9	19	2.9	21	2.0	3	— <sup>4</sup>	0	0.0

1. Deaths of infants of unknown race are included in the total calculation. For rate computations, births of infants of unknown race are allocated into the race categories according to the distribution of births of known race. 2. Other: American Indian and Other races. 3. Rates are expressed per 1,000 live births.

4. Calculations based on values of 1-4 are excluded.

**Table D-2. Trends in Infant, Neonatal, and Post Neonatal Mortality by Race<sup>1</sup>, Massachusetts: 1980-2006**

<b>INFANT MORTALITY (less than one year of age)</b>								
<b>Year</b>	<b>State Total<sup>2</sup></b>		<b>White</b>		<b>Black</b>		<b>Asian/Other<sup>3</sup></b>	
	<b>n</b>	<b>Rate<sup>4</sup></b>	<b>n</b>	<b>Rate<sup>4</sup></b>	<b>n</b>	<b>Rate<sup>4</sup></b>	<b>n</b>	<b>Rate</b>
1980	748	10.3	655	9.8	87	18.6	5	4.6
1981	710	9.6	616	9.1	85	18.2	8	6.1
1982	764	10.1	656	9.4	102	21.3	5	3.3
1983	682	9.0	579	8.3	89	19.0	12	7.4
1984	699	8.9	601	8.4	82	16.4	13	7.5
1985	745	9.1	608	8.1	126	23.8	11	6.1
1986	695	8.4	560	7.5	123	22.0	11	4.6
1987	608	7.2	486	6.4	110	17.5	12	4.5
1988	693	7.9	546	7.0	133	19.5	13	3.8
1989	697	7.6	549	6.8	131	17.7	17	4.8
1990	649	7.0	519	6.4	106	13.7	24	6.5
1991	577	6.5	461	6.0	102	13.8	14	3.9
1992	569	6.5	438	5.7	114	15.8	17	4.7
1993	523	6.2	423	5.7	87	12.5	13	3.5
1994	499	6.0	407	5.6	81	12.0	11	2.9
1995	419	5.1	333	4.7	65	10.3	21	5.5
1996	403	5.0	329	4.7	65	10.8	8	2.0
1997	425	5.3	349	5.0	66	10.6	10	2.4
1998	414	5.1	345	4.9	59	9.3	10	2.3
1999	418	5.2	334	4.8	75	11.4	9	1.9
2000	377	4.6	280	4.0	76	11.7	19	3.6
2001	407	5.0	314	4.5	77	11.7	16	3.0
2002	397	4.9	306	4.5	74	11.1	17	2.9
2003	383	4.8	290	4.3	78	11.8	15	2.6
2004	376	4.8	285	4.3	75	11.1	15	2.5
2005	391	5.1	308	4.8	63	9.3	20	3.5
2006	369	4.8	283	4.4	75	10.5	10	1.7



Table D-2 (continued). Trends in Infant, Neonatal, and Post Neonatal Mortality by Race<sup>1</sup>, Massachusetts: 1980-2006

NEONATAL MORTALITY (birth to 27 days)								
Year	State Total <sup>2</sup>		White		Black		Asian/Other <sup>3</sup>	
	n	Rate <sup>4</sup>	n	Rate <sup>4</sup>	n	Rate <sup>4</sup>	n	Rate <sup>4</sup>
1980	550	7.6	483	7.2	62	13.3	5	4.6
1981	510	6.9	442	6.5	59	12.4	5	3.8
1982	573	7.6	494	7.1	75	15.7	3	-- <sup>5</sup>
1983	482	6.3	411	5.9	63	13.4	7	4.3
1984	472	6.0	411	5.8	49	9.8	8	4.6
1985	538	6.6	447	6.0	85	16.0	5	2.8
1986	478	5.8	383	5.2	89	15.9	5	2.1
1987	432	5.1	343	4.6	80	12.7	9	3.4
1988	477	5.4	383	4.9	87	12.8	6	1.8
1989	479	5.2	376	4.7	95	12.8	8	2.3
1990	446	4.8	347	4.3	80	10.3	9	5.1
1991	401	4.5	319	4.1	72	9.8	10	2.8
1992	415	4.8	325	4.3	79	10.9	11	3.1
1993	375	4.4	300	4.1	66	9.5	9	2.4
1994	349	4.2	280	3.8	60	8.9	9	2.4
1995	298	3.6	237	3.3	50	7.9	11	2.9
1996	290	3.6	249	3.5	35	5.8	5	1.2
1997	323	4.0	271	3.9	45	7.2	7	1.7
1998	315	3.9	261	3.7	47	7.4	7	1.6
1999	332	4.1	265	3.8	61	9.3	6	1.3
2000	288	3.5	214	3.1	58	8.9	14	2.7
2001	308	3.8	239	3.5	59	9.0	10	1.9
2002	299	3.7	235	3.4	51	7.6	13	2.2
2003	285	3.6	217	3.2	58	8.8	10	1.8
2004	291	3.7	224	3.4	54	8.0	13	2.2
2005	282	3.7	226	3.5	45	6.6	11	1.9
2006	279	3.6	215	3.3	56	7.8	7	1.2

Table D-2 (continued). Trends in Infant, Neonatal, and Post Neonatal Mortality by Race<sup>1</sup>, Massachusetts: 1980-2006

POST NEONATAL MORTALITY (28-364 days)								
Year	State Total <sup>2</sup>		White		Black		Asian/Other <sup>3</sup>	
	n	Rate <sup>4</sup>	n	Rate <sup>4</sup>	n	Rate <sup>4</sup>	n	Rate <sup>4</sup>
1980	198	2.7	172	2.6	25	5.3	0	0.0
1981	200	2.7	174	2.6	26	5.8	3	— <sup>5</sup>
1982	191	2.5	162	2.3	27	5.6	2	— <sup>5</sup>
1983	200	2.7	168	2.4	26	5.6	5	3.1
1984	227	2.9	190	2.6	33	6.6	5	2.9
1985	207	2.5	161	2.1	41	7.8	6	3.3
1986	217	2.6	177	2.3	34	6.1	6	2.5
1987	176	2.1	143	1.8	30	4.8	3	— <sup>5</sup>
1988	216	2.5	163	2.1	46	6.7	7	2.0
1989	218	2.4	173	2.1	36	4.9	9	2.5
1990	203	2.2	172	2.1	26	3.4	5	1.4
1991	176	2.0	142	1.8	30	4.1	4	— <sup>5</sup>
1992	154	1.8	113	1.5	35	4.8	6	1.7
1993	148	1.7	123	1.7	21	3.0	4	— <sup>5</sup>
1994	150	1.8	127	1.7	21	3.1	2	— <sup>5</sup>
1995	121	1.5	96	1.3	15	2.4	10	2.6
1996	113	1.4	80	1.1	30	5.0	3	— <sup>5</sup>
1997	102	1.3	78	1.1	21	3.4	3	— <sup>5</sup>
1998	99	1.2	84	1.2	12	1.9	3	— <sup>5</sup>
1999	86	1.1	69	1.0	14	2.1	3	— <sup>5</sup>
2000	89	1.1	66	0.9	18	2.8	5	1.0
2001	99	1.2	75	1.1	18	2.7	6	1.1
2002	98	1.2	71	1.0	23	3.4	4	— <sup>5</sup>
2003	98	1.2	73	1.1	20	3.0	5	0.9
2004	85	1.1	61	0.9	21	3.1	3	— <sup>5</sup>
2005	109	1.4	82	1.3	18	2.7	7	1.6
2006	90	1.2	68	1.1	19	2.6	3	— <sup>5</sup>

1. Hispanic origin could not be identified from the Massachusetts death certificate before 1989; thus, Hispanic trend data are not available. Most Hispanics are included in the race category of White. Hispanic infant mortality data for the years 1990 through 2005 are presented in Table 11. 2. Deaths of infants of unknown race are included in the total calculation. For rate computations, infants of unknown race are allocated into the race categories according to the distribution of births of known race. 3. Other: American Indian and Other races. 4. Rates are expressed per 1,000 live births. 5. Calculations based on values of 1-4 are excluded.

Table D-3. Infant, Neonatal, and Post Neonatal Deaths by Cause, Massachusetts: 2006

Cause of Death <sup>1</sup>	ICD-10 Code	Infant ( $<1$ year)		Neonatal ( $<28$ days)		Post Neonatal (28-365 days)	
		#	% <sup>2,3</sup>	#	% <sup>2,3</sup>	#	% <sup>2,3</sup>
TOTAL		369	100	279	100	90	100
Infectious and parasitic diseases	A00-B99	4	-- <sup>3</sup>	1	-- <sup>3</sup>	3	-- <sup>3</sup>
Cancer	C00-C97	1	-- <sup>3</sup>	0	0.0	1	-- <sup>3</sup>
Diseases of the blood and blood forming organs (anemia)	D50-D89	1	-- <sup>3</sup>	0	0.0	1	-- <sup>3</sup>
Diseases of nervous system and ear	G00-G98, H60-H93	7	1.9	3	-- <sup>3</sup>	4	-- <sup>3</sup>
Diseases of the respiratory system	J00-J98	8	2.2	1	-- <sup>3</sup>	7	7.8
Diseases of digestive system	K00-K92	4	-- <sup>3</sup>	2	-- <sup>3</sup>	2	-- <sup>3</sup>
Congenital malformations	Q00-Q99	52	14.1	37	13.3	15	16.7
Congenital malformations of nervous system	Q00-Q07	8	2.2	4	-- <sup>3</sup>	4	-- <sup>3</sup>
Anencephalus and similar malformations	Q00	3	-- <sup>3</sup>	3	-- <sup>3</sup>	0	0.0
Congenital malformations of eye, ear, face, and neck	Q10-Q18	0	0.0	0	0.0	0	0.0
Congenital malformations of heart	Q20-Q24	16	4.3	11	3.9	5	5.6
Other congenital malformations of circulatory system	Q25-Q28	2	-- <sup>3</sup>	2	-- <sup>3</sup>	0	0.0
Congenital malformations of respiratory system	Q30-Q34	5	1.4	4	-- <sup>3</sup>	1	-- <sup>3</sup>
Cleft palate and other digestive tract malformations	Q35-Q45	1	-- <sup>3</sup>	1	-- <sup>3</sup>	0	0.0
Congenital malformations of genitourinary system	Q50-Q64	2	-- <sup>3</sup>	2	-- <sup>3</sup>	0	0.0
Congenital malformations of musculoskeletal system	Q65-Q85	3	-- <sup>3</sup>	1	-- <sup>3</sup>	2	-- <sup>3</sup>
Chromosomal abnormalities	Q90-Q99	9	2.4	8	2.9	1	-- <sup>3</sup>
Certain conditions originating in the perinatal period	P00-P96	232	62.9	225	80.6	7	7.8
Newborn affected by maternal conditions which may be unrelated to present pregnancy	P00	2	-- <sup>3</sup>	2	-- <sup>3</sup>	0	0.0
Newborn affected by maternal complications of pregnancy	P01	20	5.4	20	7.2	0	0.0
Newborn affected by complications of placenta, cord and membrane	P02	15	4.1	15	5.4	0	0.0
Newborn affected by other complications of labor and delivery	P03	3	-- <sup>3</sup>	3	-- <sup>3</sup>	0	0.0
Disorders relating to short gestation and low birthweight	P07	114	30.9	112	40.1	2	-- <sup>3</sup>
Birth trauma	P10-P15	0	0.0	0	0.0	0	0.0
Intrauterine hypoxia and birth asphyxia	P20-P21	10	2.7	10	3.6	0	0.0
Respiratory distress of newborn	P22	5	1.4	5	1.8	0	0.0
Other respiratory conditions of newborn	P23-P28	6	1.6	3	-- <sup>3</sup>	3	-- <sup>3</sup>
Infections specific to the perinatal period	P35-P39	10	2.7	8	2.9	2	-- <sup>3</sup>
Neonatal hemorrhage	P50-P52, P54	10	2.7	10	3.6	0	0.0
Other and ill-defined conditions originating in the perinatal period	P90-P96	9	2.4	9	3.2	0	0.0
Symptoms, signs, and ill-defined conditions	R00-R99	41	11.1	5	1.8	36	40.0
Sudden Infant Death Syndrome (SIDS)	R95	26	7.0	1	-- <sup>3</sup>	25	27.8
Unintentional Injuries	V01-X59	9	2.4	0	0.0	9	10.0
Homicide	X85-Y09	2	-- <sup>3</sup>	0	0.0	2	-- <sup>3</sup>
All other causes	Residual	8	2.2	5	1.8	3	-- <sup>3</sup>

1. Please see the Technical Notes in the Section C Section Definitions for an explanation of ICD-10 codes. 2. Percents not calculated for subcategories. 3. Calculations based on values 1-4 are excluded.

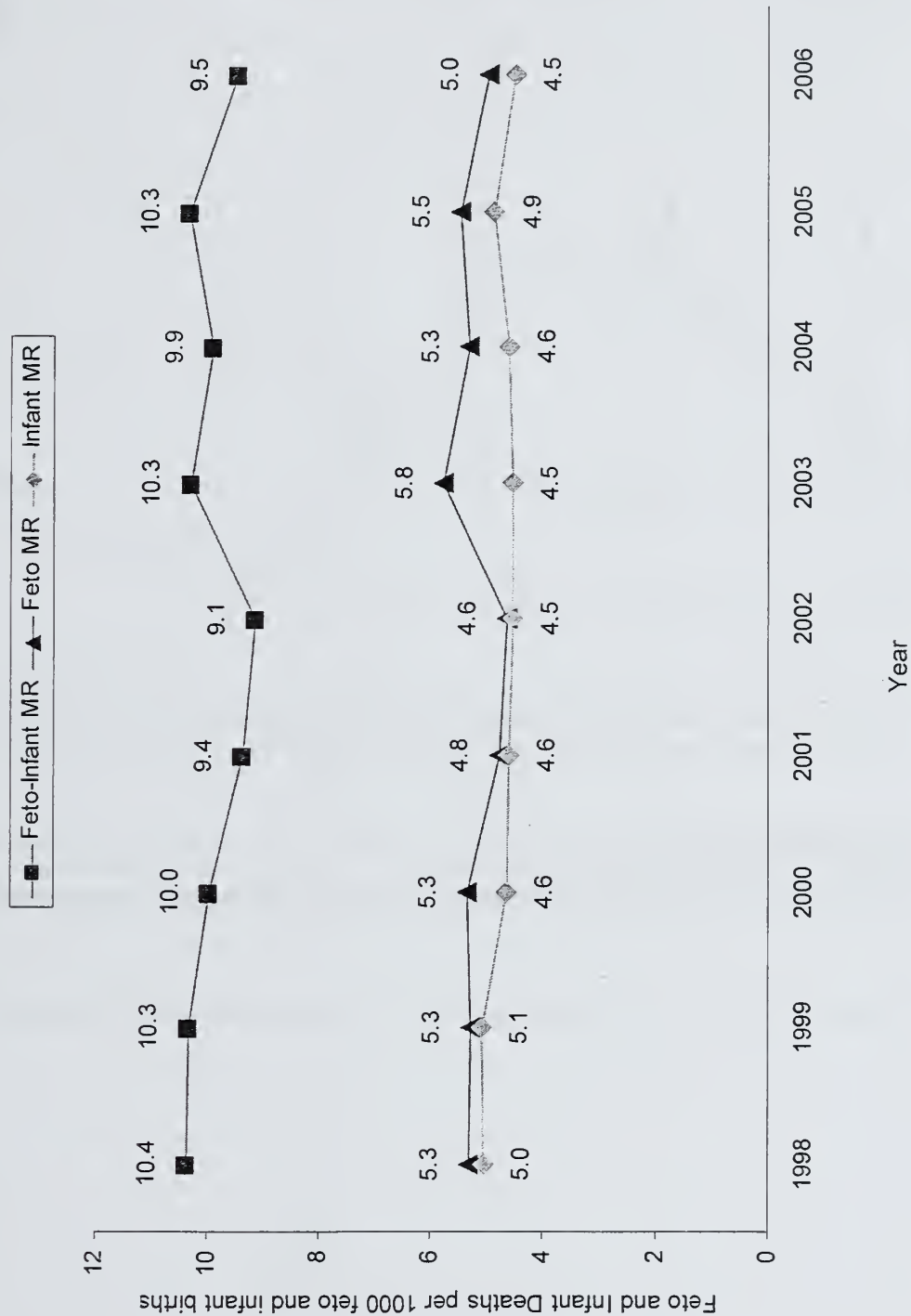
Table D-4. Infant Deaths by Major Causes, Race and Hispanic Ethnicity, Massachusetts: 2006

Cause of Death <sup>2</sup>	ICD-10 Code	White non-Hispanic		Black non-Hispanic		Asian non-Hispanic		Hispanic	
		#	%	#	%	#	%	#	%
<b>TOTAL</b>		<b>220</b>	<b>100.0%</b>	<b>72</b>	<b>100.0%</b>	<b>10</b>	<b>100.0%</b>	<b>63</b>	<b>100.0%</b>
Congenital malformations	Q00-Q99	32	14.5%	8	11.1%	3	4	8	12.7%
Certain conditions originating in the perinatal period	P00-P96	143	65.0%	49	68.1%	4	4	33	52.4%
Symptoms, signs, and ill-defined conditions	R00-R99	22	10.0%	10	13.9%	0	0.0%	9	14.3%
SIDS	R95	15	6.8%	5	6.9%	0	0.0%	6	9.5%
Unintentional Injuries	V01-X59	5	2.3%	2	4	0	0.0%	2	4
Homicide	X85-Y09	2	4	0	0.0%	0	0.0%	0	0.0%
All other causes	Residual	16	7.3%	3	4	3	4	11	17.5%

1. Race and ethnicity data in this table are presented as mutually exclusive categories and Cape Verdeans are not included with Blacks. Persons of Hispanic ethnicity are not included in a race category. Please see Table A1 in the Appendix for death data by race according to Federal definitions, which include persons of Hispanic ethnicity in a race category. Please see the Technical Notes in the Appendix for a more detailed explanation. 2. Deaths are coded according to ICD-10. Please see Appendix for comparability ratios. 3. Calculations based on values 1-4 are excluded.



Figure D-3. Feto-Infant Mortality Rate, Massachusetts: 1998-2006



**NOTE:**

Calculation of Infant Mortality Rate in this section differs from previous section in the inclusion of fetal deaths in the denominator.

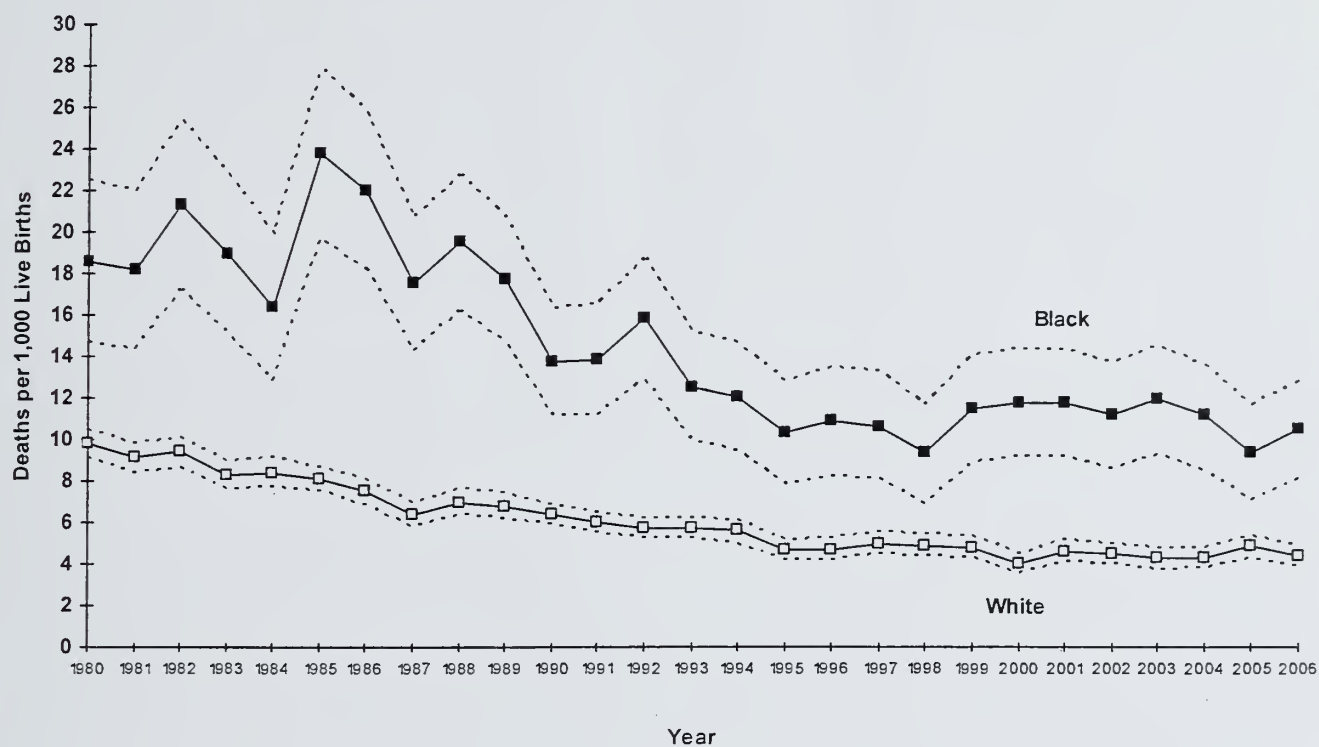
Total Feto, Infant, and Feto-Infant Mortality Rates include cases with unknown birthweight. The Feto Mortality Rate and Infant Mortality Rate may not add up to the Feto-Infant Mortality Rate due to rounding.

Figure D-4. Infant Mortality Rates, Massachusetts: 1842-2006<sup>1</sup>



1. Data not available for 1850.

Figure D-5. Infant Mortality Rates and 95% Confidence Intervals<sup>1</sup> by Race<sup>2</sup>,  
Massachusetts: 1980-2006<sup>3</sup>



1. See Technical Notes for explanation. 2. For rate computations, infant births of unknown race are allocated into race categories according to the distribution of the births of known race. 3. On tables and graphs which include data prior to June 1986, the race classifications do not include ethnicity; most Hispanics are included in the race category of whites.





## MARRIAGES & DIVORCES



## SECTION E

### MARRIAGES AND DIVORCES

Unlike many of the tables in this publication, marriages are reported by place of occurrence rather than residence. For example, if two Boston residents are married in Barnstable, the event will be reported as a Barnstable marriage. Reporting marriage by occurrence does include all possible residences including partners who live in different towns from one another and couples who reside out-of-state or out of the country. Massachusetts residents who marry outside of the state are not included in these statistics as there is no system of interstate exchange for marriage records. Divorces are reported by the county in which the final judgment was made and filed in Family and Probate Court. The Registry of Vital Records and Statistics does not record and file divorce decrees, unlike marriage, birth, and death certificates, but rather receives a report of each divorce from the courts for statistical and indexing purposes.

On May 17, 2004, same-sex couples were permitted to marry as a result of a Massachusetts Supreme Judicial Court decision in November of 2003 (*Goodridge v. The Department of Public Health*) that extended the benefits of marriage to couples of the same gender.

In 2006, 37,993 marriages occurred in Massachusetts compared to 39,507 in 2005, a decrease of 3.8%. This number includes 36,550 male/female marriages, 543 male/male and 899 female/female marriages. The number of male to female marriages decreased by 2.4% between 2005 and 2006. The rate of marriages was at 6.1 per 1,000 population in 2005 and was 5.9 in 2006 with the rate of heterosexual marriages being 5.7. The 2006 US rate of marriages per 1,000 population was 7.5, slightly lower than the 2005 US rate of 7.6. In the male to female marriages in Massachusetts in 2006, 74.3% of the brides had not previously been married. This percentage was slightly lower among the grooms--72.3%. 88.6% of the males and 77.4% of the females involved in a same-sex marriage had never been married.

In 2006, 14,621 divorces were granted in Massachusetts, an increase of 0.2% from the 14,586 divorces granted in 2005. The 2006 rate of divorce per 1,000 population in Massachusetts was 2.3, equivalent to the 2005 divorce rate of 2.3. This rate was well below the 2006 US rate of 3.7 divorces per 1,000 population. As of 2006 there was no gender field on the divorce certification, so divorce statistics for marriages of opposite-sex couples and same-sex couples are not available.

#### RATES IMPORTANT FOR THIS SECTION INCLUDE:

##### MARRIAGE RATE

$$\frac{\text{Number of Occurrence Marriages}}{\text{Total Population}} \times 1,000$$

##### DIVORCE RATE

$$\frac{\text{Number of Occurrence Divorces}}{\text{Total Population}} \times 1,000$$

**Table E-1. Marriages and Divorces by County  
Massachusetts Occurrence: 2006**

	<u>Marriages</u>			<u>Divorces</u>
	Male-Female	Male-Male	Female-Female	
State Total	36,549	543	899	14,621
<u>Counties</u>				
Barnstable	2,539	116	229	535
Berkshire	898	19	18	363
Bristol	2,849	31	45	1,508
Dukes	403	2	5	63
Essex	4,105	36	84	1,631
Franklin	394	7	20	276
Hampden	2,571	27	39	1,253
Hampshire	741	21	87	378
Middlesex	7,252	82	168	2,076
Nantucket	281	4	2	46
Norfolk	3,104	30	40	1,507
Plymouth	2,390	15	36	1,294
Suffolk	4,439	115	62	1,321
Worcester	4,583	38	64	2,370

Table includes records with known values for the characteristics of interest only.



**Table E-2. Number of Marriages by Month, Massachusetts 2006**

<u>Month</u>	<u>Male/Female</u>	<u>Male/Male</u>	<u>Female/Female</u>	<u>Total</u>
Total	36,550	543	899	37,993
January	1,459	21	30	1,510
February	1,677	26	38	1,741
March	1,718	26	48	1,792
April	2,302	37	46	2,385
May	3,268	36	88	3,392
June	4,330	73	103	4,506
July	4,177	59	106	4,342
August	4,139	58	118	4,315
September	5,057	71	117	5,246
October	4,041	71	106	4,218
November	2,200	29	46	2,275
December	2,182	36	53	2,271

Row totals includes 1 marriage with unknown genders.

Table E-3. Marriages, Divorces, and Rates per 1,000 Population

## Massachusetts Occurrence, Selected Years: 1900-2006

Year	<u>Marriages</u>		<u>Divorces</u>	
	Number	Rate	Number	Rate
1900	24,342	8.7	1,258	0.4
1905	27,184	9.1	1,554	0.5
1910	30,710	9.1	1,929	0.6
1915	31,301	8.5	2,252	0.6
1920	38,048	9.9	3,647	1.0
1925	31,238	7.5	3,395	0.8
1930	27,431	6.5	3,746	0.9
1935	30,019	6.9	4,081	0.9
1940	44,836	10.4	4,502	1.0
1945	38,197	8.5	6,833	1.5
1950	41,711	8.9	6,365	1.4
1955	35,585	7.3	5,601	1.2
1960	34,050	6.6	5,592	1.1
1965	38,281	7.2	7,728	1.5
1970	47,292	8.3	10,818	1.9
1975	42,103	7.3	16,460	2.8
1980	46,273	8.1	17,873	3.1
1985	49,849	8.6	21,573	3.7
1986	49,990	8.6	19,809	3.4
1987	49,034	8.4	16,994	2.9
1988	49,941	8.5	17,676	3.0
1989	49,174	8.4	16,819	2.9
1990	47,786	7.9	16,258	2.7
1991	44,621	7.4	14,987	2.5
1992	43,228	7.1	15,411	2.5
1993	42,355	7.0	14,435	2.4
1994	42,503	7.0	15,450	2.5
1995	41,522	6.8	15,772	2.6
1996	41,234	6.7	15,485	2.5
1997	41,528	6.7	15,942	2.6
1998	38,722	6.2	16,010	2.6
1999	39,425	6.2	15,632	2.5
2000	38,603	6.1	15,980	2.5
2001	40,048	6.3	15,324	2.4
2002	37,735	5.9	16,253	2.5
2003	36,224	5.6	15,738	2.4
2004	41,545	6.5	14,137	2.2
2005	39,507	6.1	14,586	2.3
2006	37,993	5.9	14,621	2.3

\*Numbers from 2004 forward include marriages between people of the same sex.

**Table E-4A. Marriages by Age and Prior Marital Status of Males in a Male/Female Marriage,  
Massachusetts Occurrence: 2006**

Age	Total		Males in a Male/Female Marriage					
			Never Married		Widowed		Divorced	
	Number	%	Number	%	Number	%	Number	%
Total	36,540	100.0%	26,416	100.0%	735	100.0%	9,389	100.0%
<20	347	0.9%	346	1.3%	0	0.0%	1	0.0%
20-29	14,194	38.8%	13,757	52.1%	4	0.5%	433	4.6%
30-39	12,430	34.0%	9,595	36.3%	38	5.2%	2,797	29.8%
40-49	5,686	15.6%	2,184	8.3%	118	16.1%	3,384	36.0%
50-59	2,684	7.3%	448	1.7%	184	25.0%	2,052	21.9%
60-69	873	2.4%	76	0.3%	194	26.4%	603	6.4%
70+	326	0.9%	10	0.0%	197	26.8%	119	1.3%

Table includes only records with known values for the characteristics of interest.

**Table E-4B. Marriages by Age and Prior Marital Status of Females in a Male/Female Marriage,  
Massachusetts Occurrence: 2006**

Age	Total		Females in a Male/Female Marriage					
			Never Married		Widowed		Divorced	
	Number	%	Number	%	Number	%	Number	%
Total	36,539	100.0%	27,170	100.0%	729	100.0%	8,640	100.0%
<20	1,033	2.8%	1,033	3.8%	0	0.0%	0	0.0%
20-29	17,477	47.8%	16,586	61.0%	20	2.7%	871	10.1%
30-39	10,674	29.2%	7,507	27.6%	85	11.7%	3,082	35.7%
40-49	4,781	13.1%	1,653	6.1%	185	25.4%	2,943	34.1%
50-59	1,985	5.4%	336	1.2%	207	28.4%	1,442	16.7%
60-69	442	1.2%	46	0.2%	134	18.4%	262	3.0%
70+	147	0.4%	9	0.0%	98	13.4%	40	0.5%

Table includes only records with known values for the characteristics of interest.

Table E-4C. Marriages by Age and Prior Marital Status of Males in a Male/Male Marriage, Massachusetts Occurrence: 2006								
Age	Males in a Male/Male Marriage							
	Total Number	%	Never Married Number	%	Widowed Number	%	Divorced Number	%
Total	1,086	100.0%	919	100.0%	11	100.0%	156	100.0%
<20	13	1.2%	13	1.4%	0	0.0%	0	0.0%
20-29	171	15.7%	165	18.0%	0	0.0%	6	3.8%
30-39	281	25.9%	260	28.3%	0	0.0%	21	13.5%
40-49	366	33.7%	300	32.6%	3	27.3%	63	40.4%
50-59	187	17.2%	135	14.7%	5	45.5%	47	30.1%
60-69	56	5.2%	37	4.0%	3	27.3%	16	10.3%
70+	12	1.1%	9	1.0%	0	0.0%	3	1.9%

Table includes only records with known values for the characteristics of interest.

Table E-4D. Marriages by Age and Prior Marital Status of Females in a Female/Female Marriage, Massachusetts Occurrence: 2006								
Age	Females in a Female/Female Marriage							
	Total Number	%	Never Married Number	%	Widowed Number	%	Divorced Number	%
Total	1,798	100.0%	1,391	100.0%	13	100.0%	394	100.0%
<20	9	0.5%	9	0.6%	0	0.0%	0	0.0%
20-29	338	18.8%	321	23.1%	0	0.0%	17	4.3%
30-39	558	31.0%	453	32.6%	2	15.4%	103	26.1%
40-49	571	31.8%	433	31.1%	3	23.1%	135	34.3%
50-59	256	14.2%	148	10.6%	6	46.2%	102	25.9%
60-69	58	3.2%	24	1.7%	2	15.4%	32	8.1%
70+	8	0.4%	3	0.2%	0	0.0%	5	1.3%

Table includes only records with known values for the characteristics of interest.



**Table E-5A. Number of Male/Female Marriages by Age,  
Massachusetts Occurrence: 2006**

Age of Female	Age of Male							
	Total	<20	20 - 29	30 - 39	40 - 49	50 - 59	60 - 69	70+
Total	36,543	347	14,193	12,431	5,687	2,686	873	326
<20	1,033	204	746	74	7	1	1	0
20-29	17,478	132	11,788	4,901	584	57	13	3
30-39	10,675	11	1,514	6,465	2,268	367	46	4
40-49	4,782	0	133	924	2,406	1,138	161	20
50-59	1,986	0	12	62	400	1,033	416	63
60-69	442	0	0	4	18	88	210	122
70+	147	0	0	1	4	2	26	114

Table includes only records with known values for the characteristics of interest.

**Table E-5B. Number of Male/Male Marriages by Age,  
Massachusetts Occurrence: 2006**

Age of Younger Male	Age of Older Male							
	Total	<20	20 - 29	30 - 39	40 - 49	50 - 59	60 - 69	70+
Total	543	3	55	110	196	128	40	11
<20	10	3	6	0	1	0	0	0
20-29	116	-	49	47	14	4	1	1
30-39	171	-	-	63	93	14	1	0
40-49	170	-	-	-	88	71	9	2
50-59	59	-	-	-	-	39	20	0
60-69	16	-	-	-	-	-	9	7
70+	1	-	-	-	-	-	-	1

Table includes only records with known values for the characteristics of interest.

Table E-5C. Number of Female/Female Marriages by Age, Massachusetts Occurrence: 2006								
Age of Younger Female	Age of Older Female							
	Total	<20	20 - 29	30 - 39	40 - 49	50 - 59	60 - 69	70+
Total	899	1	107	261	310	166	47	7
<20	8	1	5	2	0	0	0	0
20-29	231	-	102	109	20	0	0	0
30-39	297	-	-	150	138	9	0	0
40-49	261	-	-	-	152	97	12	0
50-59	90	-	-	-	-	60	26	4
60-69	11	-	-	-	-	-	9	2
70+	1	-	-	-	-	-	-	1
Table includes only records with known values for the characteristics of interest.								

**Table E-6A. Number of Male/Female Marriages by Number of Total Marriages of Each Party, Massachusetts Occurrence: 2006**

Female	Male					
	Total	1	2	3	4	5+
Total	36,549	26,420	8,330	1,557	212	30
1	27,175	22,856	3,826	424	63	6
2	7,801	3,171	3,677	831	106	16
3	1,378	352	724	265	31	6
4	163	35	86	31	10	1
5+	32	6	17	6	2	1

Table includes only records with known values for the characteristics of interest.

**Table E-6B. Number of Male/Male Marriages by Number of Total Marriages of Each Party, Massachusetts Occurrence: 2006**

Number of Male/Male Marriages Male Married More Often					
Male Married Less Often	Total	1	2	3	4
Total	543	408	122	12	1
1	511	408	96	6	1
2	31	-	26	5	0
3	1	-	-	1	0

Table includes only records with known values for the characteristics of interest.

**Table E-6C. Number of Female/Female Marriages by Number of Total Marriages of Each Party, Massachusetts Occurrence: 2006**

Number of Female/Female Marriages Female Married More Often					
Female Married Less Often	Total	1	2	3	4
Total	899	550	302	42	5
1	841	550	262	28	1
2	57	-	40	13	4
3	1	-	-	1	0

Table includes only records with known values for the characteristics of interest.

Date		Description		Amount	
1890	Jan 1	Balance		100.00	
	Feb 1	Interest		5.00	
	Mar 1	Interest		5.00	
	Apr 1	Interest		5.00	
	May 1	Interest		5.00	
	Jun 1	Interest		5.00	
	Jul 1	Interest		5.00	
	Aug 1	Interest		5.00	
	Sep 1	Interest		5.00	
	Oct 1	Interest		5.00	
	Nov 1	Interest		5.00	
	Dec 1	Interest		5.00	
1891	Jan 1	Balance		100.00	
	Feb 1	Interest		5.00	
	Mar 1	Interest		5.00	
	Apr 1	Interest		5.00	
	May 1	Interest		5.00	
	Jun 1	Interest		5.00	
	Jul 1	Interest		5.00	
	Aug 1	Interest		5.00	
	Sep 1	Interest		5.00	
	Oct 1	Interest		5.00	
	Nov 1	Interest		5.00	
	Dec 1	Interest		5.00	

Date		Description		Amount	
1892	Jan 1	Balance		100.00	
	Feb 1	Interest		5.00	
	Mar 1	Interest		5.00	
	Apr 1	Interest		5.00	
	May 1	Interest		5.00	
	Jun 1	Interest		5.00	
	Jul 1	Interest		5.00	
	Aug 1	Interest		5.00	
	Sep 1	Interest		5.00	
	Oct 1	Interest		5.00	
	Nov 1	Interest		5.00	
	Dec 1	Interest		5.00	
1893	Jan 1	Balance		100.00	
	Feb 1	Interest		5.00	
	Mar 1	Interest		5.00	
	Apr 1	Interest		5.00	
	May 1	Interest		5.00	
	Jun 1	Interest		5.00	
	Jul 1	Interest		5.00	
	Aug 1	Interest		5.00	
	Sep 1	Interest		5.00	
	Oct 1	Interest		5.00	
	Nov 1	Interest		5.00	
	Dec 1	Interest		5.00	

Date		Description		Amount	
1894	Jan 1	Balance		100.00	
	Feb 1	Interest		5.00	
	Mar 1	Interest		5.00	
	Apr 1	Interest		5.00	
	May 1	Interest		5.00	
	Jun 1	Interest		5.00	
	Jul 1	Interest		5.00	
	Aug 1	Interest		5.00	
	Sep 1	Interest		5.00	
	Oct 1	Interest		5.00	
	Nov 1	Interest		5.00	
	Dec 1	Interest		5.00	
1895	Jan 1	Balance		100.00	
	Feb 1	Interest		5.00	
	Mar 1	Interest		5.00	
	Apr 1	Interest		5.00	
	May 1	Interest		5.00	
	Jun 1	Interest		5.00	
	Jul 1	Interest		5.00	
	Aug 1	Interest		5.00	
	Sep 1	Interest		5.00	
	Oct 1	Interest		5.00	
	Nov 1	Interest		5.00	
	Dec 1	Interest		5.00	



## POPULATION



## SECTION F

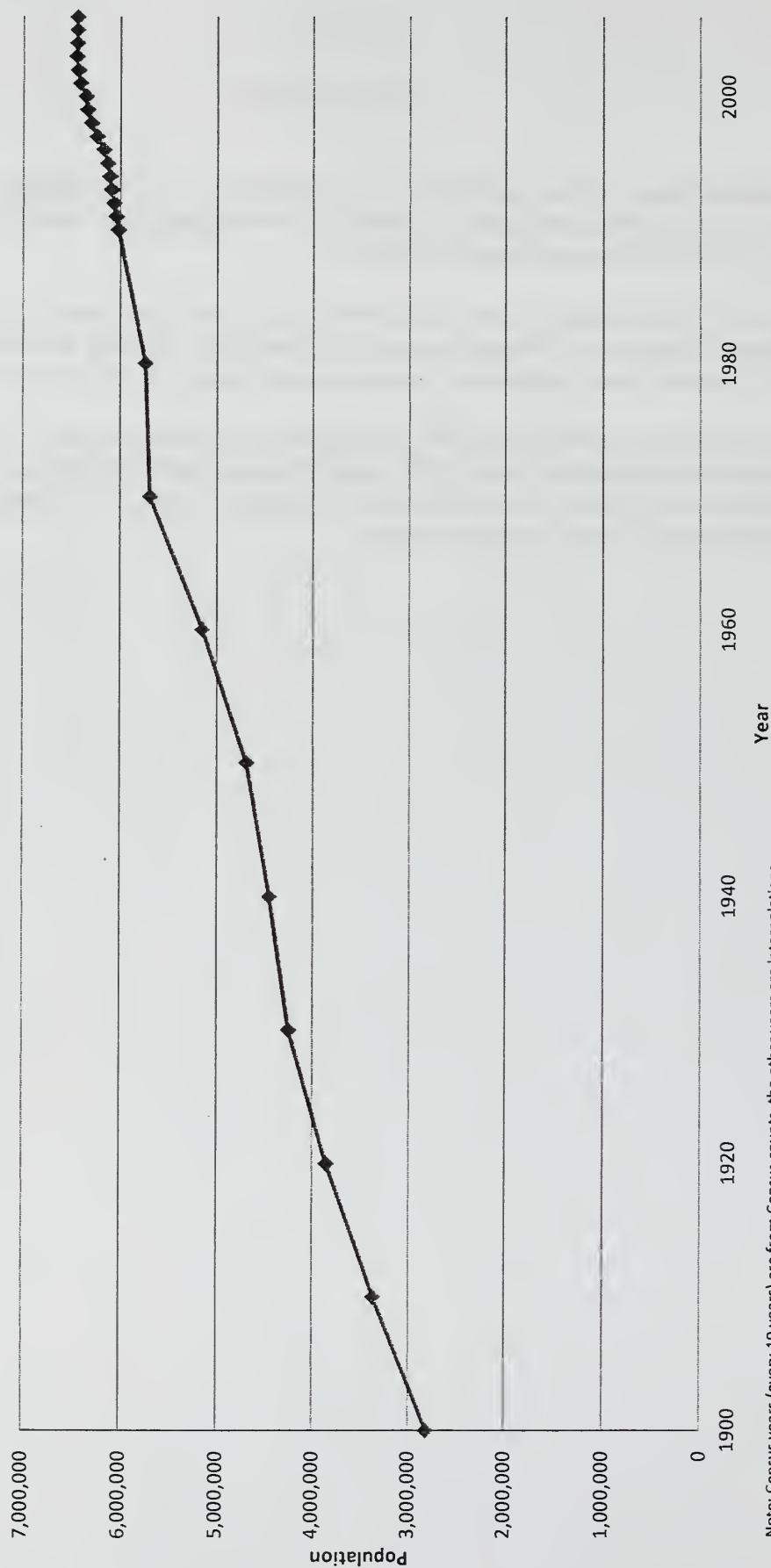
### POPULATION

The population data in this section are presented for use in computing rates for small areas and for reporting changes over time by municipality and county. They are based primarily on the US Federal Census for 2000.

All additional interpolations and calculations have been provided by Bruce Cohen and James West, Division of Research and Epidemiology, Bureau for Health Information, Statistics, Research and Evaluation, Massachusetts Department of Public Health.

In 2006, there were an estimated 6,437,193 residents of Massachusetts. This represents an 8.5% increase in population since 1987, when the population numbered 5,932,611. Among the total 2006 population in Massachusetts, 48.4% were male, 32.3% were below the age of 25, and 6.9% were 75 years of age or older

Figure F-1. Massachusetts Population: 1900-2006





**Table F-1. Population Estimates<sup>1</sup> By Age Group, Gender, Race and Hispanic Ethnicity,<sup>2</sup>  
Massachusetts: 2006**

AGE	GENDER	TOTAL	WHITE	BLACK	ASIAN	HISPANIC ETHNICITY
UNDER 1	MALE	39,102	31,543	4,874	2,587	4,587
	FEMALE	38,081	30,866	4,734	2,394	4,618
	TOTAL	77,183	62,409	9,608	4,981	9,205
1 TO 4	MALE	158,783	129,335	19,173	9,870	18,895
	FEMALE	151,897	123,923	17,972	9,612	18,200
	TOTAL	310,680	253,258	37,145	19,482	37,095
5 TO 14	MALE	408,526	346,690	39,428	20,782	47,123
	FEMALE	390,066	329,723	37,665	21,075	45,127
	TOTAL	798,592	676,413	77,093	41,857	92,250
15 TO 24	MALE	449,170	380,629	41,719	24,729	48,844
	FEMALE	446,537	376,888	41,133	26,448	45,872
	TOTAL	895,707	757,517	82,852	51,177	94,716
25 TO 34	MALE	414,819	342,346	34,645	35,996	50,534
	FEMALE	414,742	339,904	36,077	37,049	46,709
	TOTAL	829,561	682,250	70,722	73,045	97,243
35 TO 44	MALE	488,318	422,724	34,120	29,775	39,425
	FEMALE	504,231	436,240	37,076	29,163	41,004
	TOTAL	992,549	858,964	71,196	58,938	80,429
45 TO 54	MALE	473,435	425,851	27,374	18,623	24,437
	FEMALE	498,309	447,161	29,772	19,727	27,144
	TOTAL	971,744	873,012	57,146	38,350	51,581
55 TO 64	MALE	337,251	310,268	15,463	10,604	12,333
	FEMALE	367,964	336,830	18,668	11,504	15,041
	TOTAL	705,215	647,098	34,131	22,108	27,374
65 TO 74	MALE	185,797	172,012	7,541	5,801	5,484
	FEMALE	223,884	206,255	10,767	6,414	7,473
	TOTAL	409,681	378,267	18,308	12,215	12,957
75 TO 84	MALE	121,896	115,596	3,483	2,584	2,363
	FEMALE	187,363	177,341	6,291	3,431	3,547
	TOTAL	309,259	292,937	9,774	6,015	5,910
85 +	MALE	40,108	38,258	1,039	742	777
	FEMALE	96,914	93,170	2,408	1,179	1,477
	TOTAL	137,022	131,428	3,447	1,921	2,254
ALL AGES	MALE	3,117,205	2,715,252	228,859	162,093	254,802
	FEMALE	3,319,988	2,898,301	242,563	167,996	256,212
	TOTAL	6,437,193	5,613,553	471,422	330,089	511,014

1. National Center for Health Statistics. Estimates of the July 1, 2000-July 1, 2006, United States resident population from the Vintage 2006 postcensal series by year, county, age, sex, race, and Hispanic origin, prepared under a collaborative arrangement with the U.S. Census Bureau. Available on the Internet from <http://www.cdc.gov/nchs/about/major/dvs/popbridge/popbridge.htm> August 16, 2006. 2. Persons of Hispanic ethnicity are included in the race categories. These estimates are used to calculate population based rates published in Table A1.

**Table F-2. Population Estimates<sup>1</sup> By Age Group, Gender, Race and Hispanic Ethnicity<sup>2</sup>  
(mutually exclusive), Massachusetts: 2006**

AGE	GENDER	TOTAL	WHITE Non- Hispanic	BLACK Non- Hispanic	ASIAN Non- Hispanic	HISPANIC
UNDER 1	MALE	39,102	27,947	3,932	2,546	4,587
	FEMALE	38,081	27,213	3,831	2,343	4,618
	TOTAL	77,183	55,160	7,763	4,889	9,205
1 TO 4	MALE	158,783	114,279	15,527	9,724	18,895
	FEMALE	151,897	109,414	14,488	9,459	18,200
	TOTAL	310,680	223,693	30,015	19,183	37,095
5 TO 14	MALE	408,526	307,923	32,279	20,190	47,123
	FEMALE	390,066	292,495	30,995	20,452	45,127
	TOTAL	798,592	600,418	63,274	40,642	92,250
15 TO 24	MALE	449,170	339,724	35,269	24,025	48,844
	FEMALE	446,537	338,603	34,843	25,853	45,872
	TOTAL	895,707	678,327	70,112	49,878	94,716
25 TO 34	MALE	414,819	298,612	29,257	35,344	50,534
	FEMALE	414,742	300,752	29,813	36,406	46,709
	TOTAL	829,561	599,364	59,070	71,750	97,243
35 TO 44	MALE	488,318	389,235	29,180	29,358	39,425
	FEMALE	504,231	401,967	31,469	28,629	41,004
	TOTAL	992,549	791,202	60,649	57,987	80,429
45 TO 54	MALE	473,435	405,537	23,910	18,329	24,437
	FEMALE	498,309	424,657	25,915	19,353	27,144
	TOTAL	971,744	830,194	49,825	37,682	51,581
55 TO 64	MALE	337,251	300,002	13,726	10,457	12,333
	FEMALE	367,964	324,213	16,644	11,319	15,041
	TOTAL	705,215	624,215	30,370	21,776	27,374
65 TO 74	MALE	185,797	167,444	6,759	5,741	5,484
	FEMALE	223,884	200,061	9,682	6,309	7,473
	TOTAL	409,681	367,505	16,441	12,050	12,957
75 TO 84	MALE	121,896	113,627	3,153	2,545	2,363
	FEMALE	187,363	174,400	5,781	3,395	3,547
	TOTAL	309,259	288,027	8,934	5,940	5,910
85 +	MALE	40,108	37,599	952	722	777
	FEMALE	96,914	91,927	2219	1,150	1,477
	TOTAL	137,022	129,526	3,171	1,872	2,254
ALL AGES	MALE	3,117,205	2,501,929	193,944	158,981	254,802
	FEMALE	3,319,988	2,685,702	205,680	164,668	256,212
	TOTAL	6,437,193	5,187,631	399,624	323,649	511,014

1. National Center for Health Statistics. Estimates of the July 1, 2000-July 1, 2006, United States resident population from the Vintage 2006 postcensal series by year, county, age, sex, race, and Hispanic origin, prepared under a collaborative arrangement with the U.S. Census Bureau. Available on the Internet from <http://www.cdc.gov/nchs/about/major/dvs/popbridge/popbridge.htm> August 16, 2006. 2. Persons of Hispanic ethnicity are NOT included in the race categories. These estimates are used to calculate population based rates published in this report, except for Table A1.



Figure F-2 Population by Age Group, Massachusetts: 2006

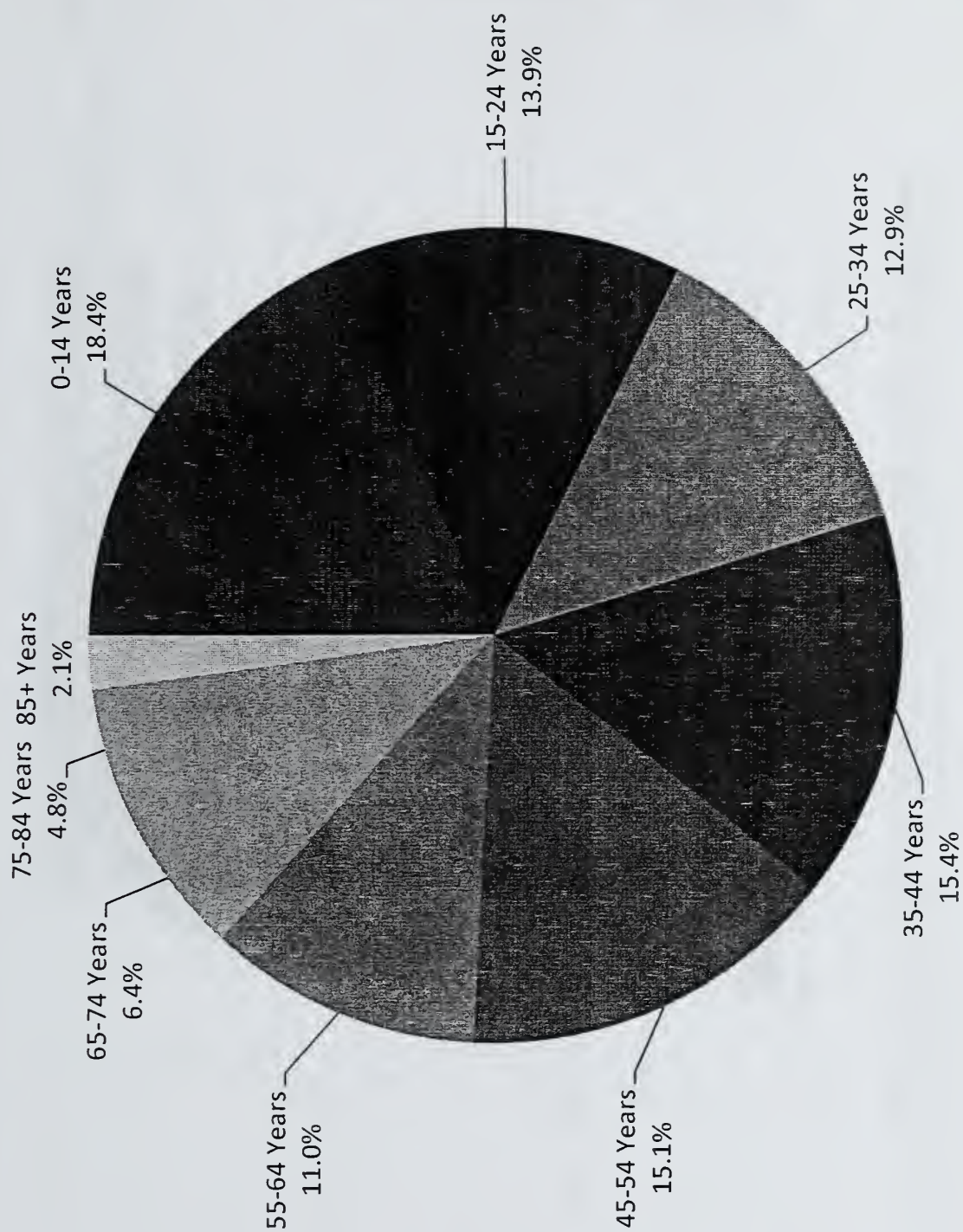


Figure F-3. Population by Race/ Hispanic Ethnicity, Massachusetts: 2006

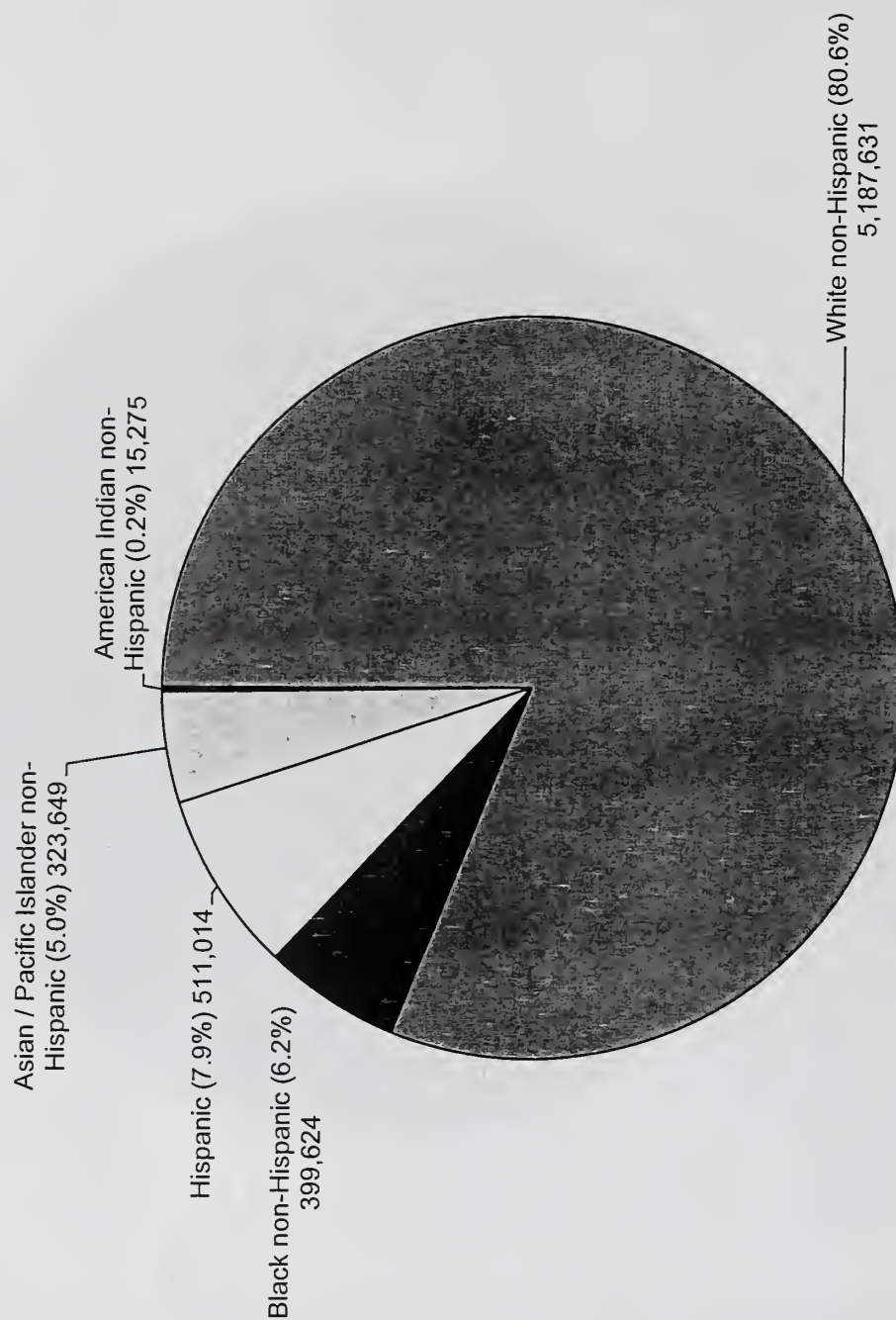
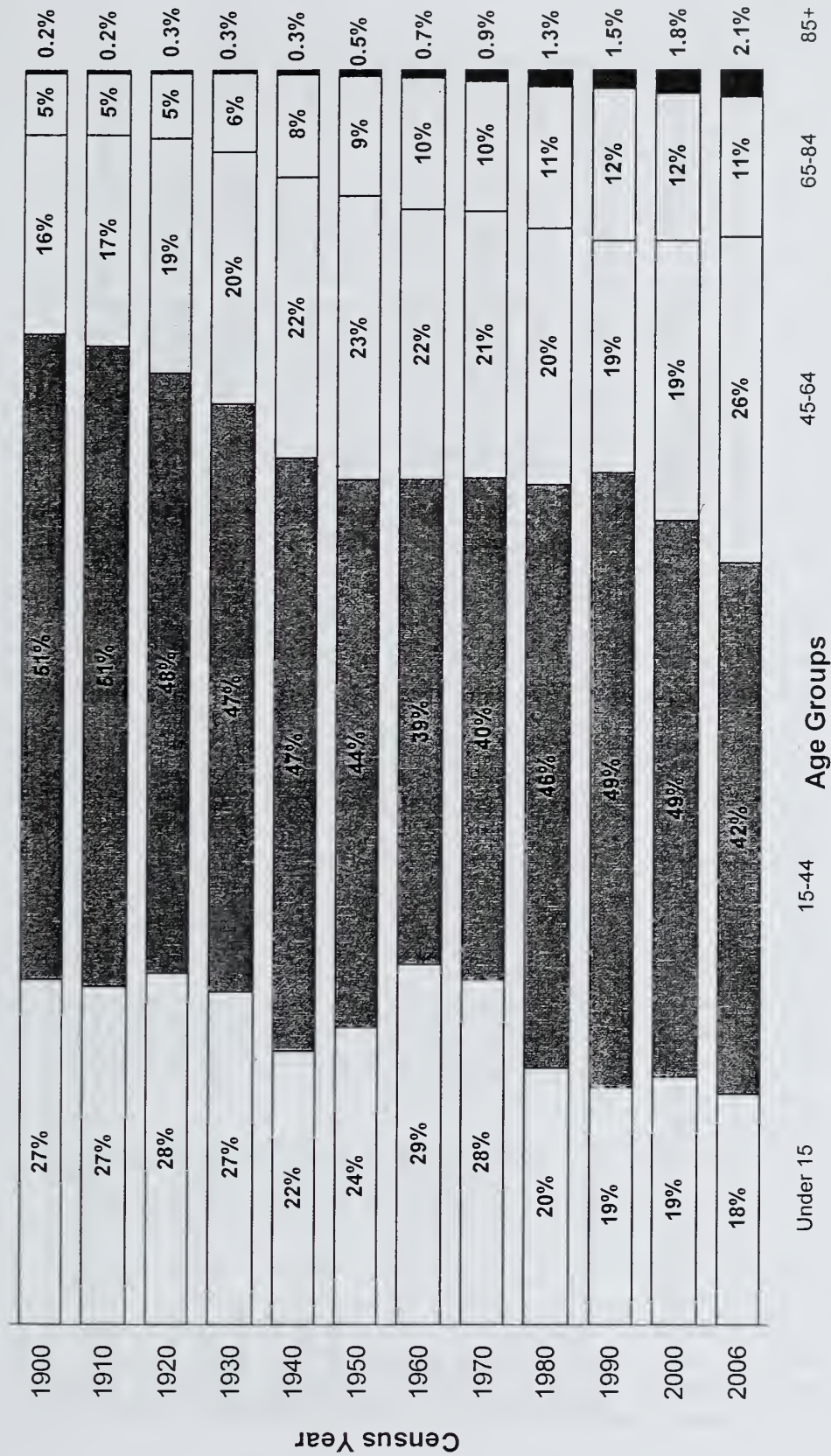




Figure F-4. Changes in Age Composition of the Population, Massachusetts: 1900-2006



Source: US Census Bureau 1900-1999. Resident death data for 2000 are calculated using the Massachusetts (Department of Public Health) Modified Age, Race/Ethnicity, & Sex Estimates 2000 (MMARS00), released October, 2006. Resident data for 2006 comes from the National Center for Health Statistics (NCHS).  
 Note: Percentages based on counts with known age.

Table F-3. Massachusetts Population by County: 1930-2006									
	1930	1940	1950	1960	1970	1980	1990	2000	2006
<b>State</b>	4,249,614	4,316,721	4,690,514	5,148,578	5,689,170	5,737,037	6,016,425	6,349,097	6,437,193
<b>Counties</b>									
Barnstable	32,305	37,295	46,805	70,286	96,656	147,925	186,605	222,230	224,816
Berkshire	120,700	122,273	132,966	142,135	149,402	145,110	139,352	134,953	131,117
Bristol	364,590	364,637	381,569	398,488	444,301	474,641	506,325	534,678	545,379
Dukes	4,953	5,669	5,633	5,829	6,117	8,942	11,639	14,987	15,515
Essex	498,040	496,313	522,384	568,831	637,887	633,632	670,080	723,419	735,958
Franklin	49,612	49,453	52,747	54,864	59,210	64,317	70,092	71,535	72,183
Hampden	335,496	332,107	367,971	429,353	459,050	443,018	456,310	456,228	460,520
Hampshire	72,801	72,461	87,594	103,229	123,981	138,813	146,568	152,251	153,471
Middlesex	934,924	971,390	1,064,569	1,238,742	1,397,268	1,367,034	1,398,468	1,465,396	1,467,016
Nantucket	3,678	3,401	3,484	3,559	3,774	5,087	6,012	9,520	10,240
Norfolk	299,426	325,180	392,308	510,256	605,051	606,587	616,087	650,308	654,753
Plymouth	162,311	168,824	189,468	248,449	333,314	405,437	435,276	472,822	493,623
Suffolk	879,536	863,248	896,615	791,329	735,190	650,142	663,906	689,807	687,610
Worcester	491,242	504,470	546,401	583,228	637,969	646,352	709,705	750,963	784,922

NOTE: The United States Census numbers were used from 1930 to 2000 with the 2006 estimate provided by the Division of Research and Epidemiology, Bureau of Health Information, Statistics, Research, and Epidemiology, MDPH. Rounding in the algorithm may result in the total not being the sum of the counties.



**Table F-4. Massachusetts Population by City and Town: 1980, 1990, and 2000 US Census**

City/Town	1980	1990	2000	City/Town	1980	1990	2000
ABINGTON	13,517	13,817	14,605	CAMBRIDGE	95,322	95,802	101,355
ACTON	17,544	17,872	20,331	CANTON	18,182	18,530	20,775
ACUSHNET	8,704	9,554	10,161	CARLISLE	3,306	4,333	4,717
ADAMS	10,381	9,445	8,809	CARVER	6,988	10,590	11,163
AGAWAM	26,271	27,323	28,144	CHARLEMONT	1,149	1,249	1,358
ALFORD	394	418	399	CHARLTON	6,719	9,576	11,263
AMESBURY	13,971	14,997	16,450	CHATHAM	6,071	6,579	6,625
AMHERST	33,229	35,228	34,874	CHELMSFORD	31,174	32,383	33,858
ANDOVER	26,370	29,151	31,247	CHELSEA	25,431	28,710	35,080
AQUINNAH (GAY HEAD)	220	201	344	CHESHIRE	3,124	3,479	3,401
ARLINGTON	48,219	44,630	42,389	CHESTER	1,123	1,280	1,308
ASHBURNHAM	4,075	5,433	5,546	CHESTERFIELD	1,000	1,048	1,201
ASHBY	2,311	2,717	2,845	CHICOPEE	55,112	56,632	54,653
ASHFIELD	1,458	1,715	1,800	CHILMARK	489	650	843
ASHLAND	9,165	12,066	14,674	CLARKSBURG	1,871	1,745	1,686
ATHOL	10,634	11,451	11,299	CLINTON	12,771	13,222	13,435
ATTLEBORO	34,196	38,383	42,068	COHASSET	7,174	7,075	7,261
AUBURN	14,845	15,005	15,901	COLRAIN	1,552	1,757	1,813
AVON	5,026	4,558	4,443	CONCORD	16,293	17,076	16,993
AYER	6,993	6,871	7,287	CONWAY	1,213	1,529	1,809
BARNSTABLE	30,898	40,949	47,821	CUMMINGTON	657	785	978
BARRE	4,102	4,546	5,113	DALTON	6,797	7,155	6,892
BECKET	1,339	1,481	1,755	DANVERS	24,100	24,174	25,212
BEDFORD	13,067	12,996	12,595	DARTMOUTH	23,966	27,244	30,666
BELCHERTOWN	8,339	10,579	12,968	DEDHAM	25,298	23,782	23,464
BELLINGHAM	14,300	14,877	15,314	DEERFIELD	4,517	5,018	4,750
BELMONT	26,100	24,720	24,194	DENNIS	12,360	13,864	15,973
BERKLEY	2,731	4,237	5,749	DIGHTON	5,352	5,631	6,175
BERLIN	2,215	2,293	2,380	DOUGLAS	3,730	5,438	7,045
BERNARDSTON	1,750	2,048	2,155	DOVER	4,703	4,915	5,558
BEVERLY	37,655	38,195	39,862	DRACUT	21,249	25,594	28,562
BILLERICA	36,727	37,609	38,981	DUDLEY	8,717	9,540	10,036
BLACKSTONE	6,570	8,023	8,804	DUNSTABLE	1,671	2,236	2,829
BLANDFORD	1,038	1,187	1,214	DUXBURY	11,807	13,895	14,248
BOLTON	2,530	3,134	4,148	EAST BRIDGEWATER	9,945	11,104	12,974
BOSTON	562,994	574,283	589,141	EAST BROOKFIELD	1,955	2,033	2,097
BOURNE	13,874	16,064	18,721	EAST LONGMEADOW	12,905	13,367	14,100
BOXBOROUGH	3,126	3,343	4,868	EASTHAM	3,472	4,462	5,453
BOXFORD	5,374	6,266	7,921	EASTHAMPTON	15,580	15,537	15,994
BOYLSTON	3,470	3,517	4,008	EASTON	16,623	19,807	22,299
BRAINTREE	36,337	33,836	33,828	EDGARTOWN	2,204	3,062	3,779
BREWSTER	5,226	8,440	10,094	EGREMONT	1,311	1,229	1,345
BRIDGEWATER	17,202	21,249	25,185	ERVING	1,326	1,372	1,467
BRIMFIELD	2,318	3,001	3,339	ESSEX	2,998	3,260	3,267
BROCKTON	95,172	92,788	94,304	EVERETT	37,195	35,701	38,037
BROOKFIELD	2,397	2,968	3,051	FAIRHAVEN	15,759	16,132	16,159
BROOKLINE	55,062	54,718	57,107	FALL RIVER	92,574	92,703	91,938
BUCKLAND	1,864	1,928	1,991	FALMOUTH	23,640	27,960	32,660
BURLINGTON	23,486	23,302	22,876	FITCHBURG	39,580	41,194	39,102

**Table F-4 (continued). Massachusetts Population by City and Town: 1980, 1990, and 2000 US Census**

City/Town	1980	1990	2000	City/Town	1980	1990	2000
FLORIDA	730	742	676	LANESBOROUGH	3,131	3,032	2,990
FOXBOROUGH	14,148	14,637	16,246	LAWRENCE	63,175	70,207	72,043
FRAMINGHAM	65,113	64,989	66,910	LEE	6,247	5,849	5,985
FRANKLIN	18,217	22,095	29,560	LEICESTER	9,446	10,191	10,471
FREETOWN	7,058	8,522	8,472	LENOX	6,523	5,069	5,077
GARDNER	17,900	20,125	20,770	LEOMINSTER	34,508	38,145	41,303
GEORGETOWN	5,687	6,384	7,377	LEVERETT	1,471	1,785	1,663
GILL	1,259	1,583	1,363	LEXINGTON	29,479	28,974	30,355
GLOUCESTER	27,768	28,716	30,273	LEYDEN	498	662	772
GOSHEN	651	830	921	LINCOLN	7,098	7,666	8,056
GOSNOLD	63	98	86	LITTLETON	6,970	7,051	8,184
GRAFTON	11,238	13,035	14,894	LONGMEADOW	16,301	15,467	15,633
GRANBY	5,380	5,565	6,132	LOWELL	92,418	103,439	105,167
GRANVILLE	1,204	1,403	1,521	LUDLOW	18,150	18,820	21,209
GREAT BARRINGTON	7,405	7,725	7,527	LUNENBURG	8,405	9,117	9,401
GREENFIELD	18,436	18,666	18,168	LYNN	78,471	81,245	89,050
GROTON	6,154	7,511	9,547	LYNNFIELD	11,267	11,274	11,542
GROVELAND	5,040	5,214	6,038	MALDEN	53,386	53,884	56,340
HADLEY	4,125	4,231	4,793	MANCHESTER	5,424	5,286	5,228
HALIFAX	5,513	6,526	7,500	MANSFIELD	13,453	16,568	22,414
HAMILTON	6,960	7,280	8,315	MARBLEHEAD	20,126	19,971	20,377
HAMPDEN	4,745	4,709	5,171	MARION	3,932	4,496	5,123
HANCOCK	643	628	721	MARLBOROUGH	30,617	31,813	36,255
HANOVER	11,358	11,912	13,164	MARSHFIELD	20,916	21,531	24,324
HANSON	8,617	9,028	9,495	MASHPEE	3,700	7,884	12,946
HARDWICK	2,272	2,385	2,622	MATTAPOISETT	5,597	5,850	6,268
HARVARD	12,170	12,329	5,981	MAYNARD	9,590	10,325	10,433
HARWICH	8,971	10,275	12,386	MEDFIELD	10,220	10,531	12,273
HATFIELD	3,045	3,184	3,249	MEDFORD	58,076	57,407	55,765
HAVERHILL	46,865	51,418	58,969	MEDWAY	8,447	9,931	12,448
HAWLEY	280	317	336	MELROSE	30,055	28,150	27,134
HEATH	482	716	805	MENDON	3,108	4,010	5,286
HINGHAM	20,339	19,821	19,882	MERRIMAC	4,451	5,166	6,138
HINSDALE	1,707	1,959	1,872	METHUEN	36,701	39,990	43,789
HOLBROOK	11,140	11,041	10,785	MIDDLEBOROUGH	16,404	17,867	19,941
HOLDEN	13,336	14,628	15,621	MIDDLEFIELD	385	392	542
HOLLAND	1,589	2,185	2,407	MIDDLETON	4,135	4,921	7,744
HOLLISTON	12,622	12,926	13,801	MILFORD	23,390	25,355	26,799
HOLYOKE	44,678	43,704	39,838	MILLBURY	11,808	12,228	12,784
HOPEDALE	3,905	5,666	5,907	MILLIS	6,908	7,613	7,902
HOPKINTON	7,114	9,191	13,346	MILLVILLE	1,693	2,236	2,724
HUBBARDSTON	1,797	2,797	3,909	MILTON	25,860	25,725	26,062
HUDSON	16,408	17,233	18,113	MONROE	179	115	93
HULL	9,714	10,466	11,050	MONSON	7,315	7,776	8,359
HUNTINGTON	1,804	1,987	2,174	MONTAGUE	8,011	8,316	8,489
IPSWICH	11,158	11,873	12,987	MONTEREY	818	805	934
KINGSTON	7,362	9,045	11,780	MONTGOMERY	637	759	654
LAKEVILLE	5,931	7,785	9,821	WASHINGTON	93	135	130
LANCASTER	6,334	6,661	7,380	NAHANT	3,947	3,828	3,632



**Table F-4 (continued). Massachusetts Population by City and Town: 1980, 1990, and 2000 US Census**

City/Town	1980	1990	2000	City/Town	1980	1990	2000
NANTUCKET	5,087	6,012	9,520	READING	22,678	22,539	23,708
NATICK	29,461	30,510	32,170	REHOBOTH	7,570	8,656	10,172
NEEDHAM	27,901	27,557	28,911	REVERE	42,423	42,786	47,283
NEW ASHFORD	159	192	247	RICHMOND	1,659	1,677	1,604
NEW BEDFORD	98,478	99,922	93,768	ROCHESTER	3,205	3,921	4,581
NEW BRAINTREE	671	881	927	ROCKLAND	15,695	16,123	17,670
NEW MARLBOROUGH	1,160	1,240	1,494	ROCKPORT	6,345	7,482	7,767
NEW SALEM	688	802	929	ROWE	336	378	351
NEWBURY	4,529	5,623	6,717	ROWLEY	3,867	4,452	5,500
NEWBURYPORT	15,900	16,317	17,189	ROYALSTON	955	1,147	1,254
NEWTON	83,622	82,585	83,829	RUSSELL	1,570	1,594	1,657
NORFOLK	6,363	9,270	10,460	RUTLAND	4,334	4,936	6,353
NORTH ADAMS	18,063	16,797	14,681	SALEM	38,220	38,091	40,407
NORTH ANDOVER	20,129	22,792	27,202	SALISBURY	5,973	6,882	7,827
NORTH ATTLEBORO	21,095	25,038	27,143	SANDISFIELD	720	667	824
NORTH BROOKFIELD	4,150	4,708	4,683	SANDWICH	8,727	15,489	20,136
NORTH READING	11,455	12,002	13,837	SAUGUS	24,746	25,549	26,078
NORTHAMPTON	29,286	29,289	28,978	SAVOY	644	634	705
NORTHBOROUGH	10,568	11,929	14,013	SCITUATE	17,317	16,786	17,863
NORTHBRIDGE	12,246	13,371	13,182	SEEKONK	12,269	13,046	13,425
NORTHFIELD	2,386	2,838	2,951	SHARON	13,601	15,517	17,408
NORTON	12,690	14,265	18,036	SHEFFIELD	2,743	2,910	3,335
NORWELL	9,182	9,279	9,765	SHELBURNE	2,002	2,012	2,058
NORWOOD	29,711	28,700	28,587	SHERBORN	4,049	3,989	4,200
OAK BLUFFS	1,984	2,804	3,713	SHIRLEY	5,124	6,118	6,373
OAKHAM	994	1,503	1,673	SHREWSBURY	22,674	24,146	31,640
ORANGE	6,844	7,312	7,518	SHUTESBURY	1,049	1,561	1,810
ORLEANS	5,306	5,838	6,341	SOMERSET	18,813	17,655	18,234
OTIS	963	1,073	1,365	SOMERVILLE	77,372	76,210	77,478
OXFORD	11,680	12,588	13,352	SOUTH HADLEY	16,399	16,685	17,196
PALMER	11,389	12,054	12,497	SOUTHAMPTON	4,137	4,478	5,387
PAXTON	3,762	4,047	4,386	SOUTHBOROUGH	6,193	6,628	8,781
PEABODY	45,976	47,039	48,129	SOUTHBRIDGE	16,665	17,816	17,214
PELHAM	1,112	1,373	1,403	SOUTHWICK	7,382	7,667	8,835
PEMBROKE	13,487	14,544	16,927	SPENCER	10,774	11,645	11,691
PEPPERELL	8,061	10,098	11,142	SPRINGFIELD	152,319	156,983	152,082
PERU	633	779	821	STERLING	5,440	6,481	7,257
PETERSHAM	1,024	1,131	1,180	STOCKBRIDGE	2,328	2,408	2,276
PHILLIPSTON	953	1,485	1,621	STONEHAM	21,424	22,203	22,219
PITTSFIELD	51,974	48,622	45,793	STOUGHTON	26,710	26,777	27,149
PLAINFIELD	425	571	589	STOW	5,144	5,328	5,902
PLAINVILLE	5,857	6,871	7,683	STURBRIDGE	5,976	7,775	7,837
PLYMOUTH	35,913	45,608	51,701	SUDBURY	14,027	14,358	16,841
PLYMPTON	1,974	2,384	2,637	SUNDERLAND	2,929	3,399	3,777
PRINCETON	2,425	3,189	3,353	SUTTON	5,855	6,824	8,250
PROVINCETOWN	3,536	3,561	3,431	SWAMPSCOTT	13,837	13,650	14,412
QUINCY	84,743	84,985	88,025	SWANSEA	15,461	15,411	15,901
RANDOLPH	28,218	30,093	30,963	TAUNTON	45,001	49,832	55,976
RAYNHAM	9,085	9,867	11,739	TEMPLETON	6,070	6,438	6,799

**Table F-4 (continued). Massachusetts Population by City and Town: 1980, 1990, and 2000 US Census**

City/Town	1980	1990	2000	City/Town	1980	1990	2000
TEWKSBURY	24,635	27,266	28,851	WINCHESTER	20,701	20,267	20,810
TISBURY	2,972	3,120	3,755	WINDSOR	598	770	875
TOLLAND	235	289	426	WINTHROP	19,294	18,127	18,303
TOPSFIELD	5,709	5,754	6,141	WOBURN	36,626	35,943	37,258
TOWNSEND	7,201	8,496	9,198	WORCESTER	161,799	169,759	172,648
TRURO	1,486	1,573	2,087	WORTHINGTON	932	1,156	1,270
TYNGSBOROUGH	5,683	8,642	11,081	WRENTHAM	7,580	9,006	10,554
TYRINGHAM	344	369	350	YARMOUTH	18,449	21,174	24,807
UPTON	3,886	4,677	5,642				
UXBRIDGE	8,374	10,415	11,156	Statewide Totals	5,737,037	6,016,425	6,349,097
WAKEFIELD	24,895	24,825	24,804				
WALES	1,177	1,566	1,737				
WALPOLE	18,859	20,212	22,824				
WALTHAM	58,200	57,878	59,226				
WARE	8,953	9,808	9,707				
WAREHAM	18,457	19,232	20,335				
WARREN	3,777	4,437	4,776				
WARWICK	603	740	750				
WASHINGTON	587	615	544				
WATERTOWN	34,384	33,284	32,986				
WAYLAND	12,170	11,874	13,100				
WEBSTER	14,480	16,196	16,415				
WELLESLEY	27,209	26,615	26,613				
WELLFLEET	2,209	2,493	2,749				
WENDELL	694	899	986				
WENHAM	3,897	4,212	4,440				
WEST BOYLSTON	6,204	6,611	7,481				
WEST BRIDGEWATER	6,359	6,389	6,634				
WEST BROOKFIELD	3,026	3,532	3,804				
WEST NEWBURY	2,861	3,421	4,149				
WEST SPRINGFIELD	27,042	27,537	27,899				
WEST STOCKBRIDGE	1,280	1,483	1,416				
WEST TISBURY	1,010	1,704	2,467				
WESTBOROUGH	13,619	14,133	17,997				
WESTFIELD	36,465	38,372	40,072				
WESTFORD	13,434	16,392	20,754				
WESTHAMPTON	1,137	1,327	1,468				
WESTMINSTER	5,139	6,191	6,907				
WESTON	11,169	10,200	11,469				
WESTPORT	13,763	13,852	14,183				
WESTWOOD	13,212	12,557	14,117				
WEYMOUTH	55,601	54,063	53,988				
WHATELY	1,341	1,375	1,573				
WHITMAN	13,534	13,240	13,882				
WILBRAHAM	12,053	12,635	13,473				
WILLIAMSBURG	2,237	2,515	2,427				
WILLIAMSTOWN	8,741	8,220	8,424				
WILMINGTON	17,471	17,651	21,363				
WINCHENDON	7,019	8,805	9,611				

**Table F-5. Population Counts and Estimates, Massachusetts: 1980, 1985, 1990, 1995-2006**

AGE GROUP	YEAR	TOTAL	MALE	FEMALE
0 - 4	1980	337,215	173,029	164,186
	1985	379,282	194,237	185,045
	1990	421,349	215,445	205,904
	1995	415,741	213,448	202,293
	1996	409,660	210,345	199,315
	1997	404,223	207,394	196,829
	1998	399,860	204,983	194,877
	1999	399,310	204,397	194,913
	2000	397,268	203,062	194,206
	2001	390,178	199,346	190,832
	2002	394,810	201,751	193,059
	2003	395,047	202,150	192,897
	2004	397,472	203,484	193,988
	2005	400,113	204,835	195,278
	2006	387,863	197,885	189,978
5 - 9	1980	374,734	191,602	183,132
	1985	375,677	192,542	183,135
	1990	376,619	193,482	183,137
	1995	404,660	206,980	197,680
	1996	410,066	209,813	200,253
	1997	414,757	212,313	202,444
	1998	414,810	212,483	202,327
	1999	423,609	217,197	206,412
	2000	430,861	221,145	209,716
	2001	413,188	211,921	201,267
	2002	408,718	209,582	199,136
	2003	400,041	204,666	195,375
	2004	393,854	201,243	192,611
	2005	388,695	198,626	190,069
	2006	410,980	210,675	200,305
10 - 14	1980	461,332	235,669	225,663
	1985	404,174	206,784	197,390
	1990	347,016	177,899	169,117
	1995	372,452	191,298	181,154
	1996	380,540	195,292	185,248
	1997	388,421	199,263	189,158
	1998	391,860	200,941	190,919
	1999	412,311	211,441	200,870
	2000	431,247	221,168	210,079
	2001	431,303	221,113	210,190
	2002	436,640	223,771	212,869
	2003	434,596	222,868	211,728
	2004	430,081	220,952	209,129
	2005	421,370	216,320	205,050
	2006	446,811	225,473	221,338



Table F-5 (continued). Population Counts and Estimates, Massachusetts: 1980, 1985, 1990, 1995-2006

AGE GROUP	YEAR	TOTAL	MALE	FEMALE
15 - 19	1980	548,239	274,859	273,380
	1985	482,135	242,074	240,061
	1990	416,030	209,289	206,741
	1995	397,926	200,053	197,873
	1996	407,088	204,859	202,229
	1997	410,740	207,139	203,601
	1998	418,478	211,026	207,452
	1999	417,862	211,120	206,742
	2000	415,737	210,460	205,277
	2001	409,422	209,348	200,074
	2002	409,688	210,256	199,432
	2003	415,270	213,161	202,109
	2004	421,444	216,038	205,406
	2005	428,350	219,526	208,824
	2006	446,811	225,473	221,338
20 - 24	1980	552,902	270,713	282,189
	1985	535,048	263,685	271,363
	1990	517,194	256,657	260,537
	1995	486,412	241,442	244,970
	1996	469,010	232,807	236,203
	1997	463,895	230,140	233,755
	1998	465,352	230,886	234,466
	1999	435,534	215,192	220,342
	2000	404,279	198,756	205,523
	2001	425,247	209,206	216,041
	2002	432,849	213,925	218,924
	2003	433,897	216,030	217,867
	2004	429,515	215,227	214,288
	2005	423,507	213,810	209,697
	2006	448,896	223,697	225,199
25 - 29	1980	489,175	239,341	249,834
	1985	522,748	258,318	264,430
	1990	556,320	277,295	279,025
	1995	510,664	255,351	255,313
	1996	514,088	257,258	256,830
	1997	511,765	256,137	255,628
	1998	502,345	251,390	250,955
	1999	468,891	232,721	236,170
	2000	434,024	213,376	220,648
	2001	422,879	208,425	214,454
	2002	416,009	204,894	211,115
	2003	416,701	205,376	211,325
	2004	421,833	208,051	213,782
	2005	429,834	212,504	217,330
	2006	415,311	208,183	207,128



**Table F-5 (continued). Population Counts and Estimates, Massachusetts: 1980, 1985, 1990, 1995-2006**

AGE GROUP	YEAR	TOTAL	MALE	FEMALE
30 - 34	1980	446,395	217,649	228,746
	1985	494,363	243,175	251,188
	1990	542,330	268,701	273,629
	1995	529,735	263,782	265,953
	1996	518,478	258,141	260,337
	1997	512,473	255,510	256,963
	1998	502,992	251,066	251,926
	1999	498,617	247,105	251,512
	2000	492,764	242,386	250,378
	2001	492,792	242,263	250,529
	2002	484,509	238,470	246,039
	2003	473,853	233,136	240,717
	2004	458,801	225,942	232,859
	2005	441,503	217,347	224,156
	2006	414,250	206,636	207,614
35 - 39	1980	348,552	169,502	179,050
	1985	414,863	203,352	211,511
	1990	481,174	237,202	243,972
	1995	522,467	258,017	264,450
	1996	527,036	260,758	266,278
	1997	525,899	260,595	265,304
	1998	522,796	259,389	263,407
	1999	532,463	263,328	269,135
	2000	540,593	266,507	274,086
	2001	538,710	265,684	273,026
	2002	527,402	260,018	267,384
	2003	515,460	253,838	261,622
	2004	499,574	245,962	253,612
	2005	489,377	240,691	248,686
	2006	473,786	233,466	240,320
40 - 44	1980	278,748	134,925	143,823
	1985	356,061	173,162	182,899
	1990	433,374	211,399	221,975
	1995	466,848	229,037	237,811
	1996	477,644	234,298	243,346
	1997	489,729	240,396	249,333
	1998	496,569	243,966	252,603
	1999	510,253	250,285	259,968
	2000	522,402	255,838	266,564
	2001	537,406	263,687	273,719
	2002	537,951	264,609	273,342
	2003	537,967	264,898	273,069
	2004	536,447	264,384	272,063
	2005	530,890	262,009	268,881
	2006	518,763	254,852	263,911

**Table F-5 (continued). Population Counts and Estimates, Massachusetts: 1980, 1985, 1990, 1995-2006**

AGE GROUP	YEAR	TOTAL	MALE	FEMALE
45 - 49	1980	278,261	134,444	143,817
	1985	305,798	148,540	157,258
	1990	333,334	162,636	170,698
	1995	424,194	206,334	217,860
	1996	440,676	214,576	226,100
	1997	439,700	214,255	225,445
	1998	442,352	215,783	226,569
	1999	452,918	220,796	232,122
	2000	461,945	225,029	236,916
	2001	479,151	233,606	245,545
	2002	488,975	238,190	250,785
	2003	498,397	243,290	255,107
	2004	503,655	245,938	257,717
	2005	508,605	248,560	260,045
	2006	515,187	251,673	263,514
50 - 54	1980	306,574	146,211	160,363
	1985	284,588	136,396	148,192
	1990	262,601	126,581	136,020
	1995	317,854	154,500	163,354
	1996	331,747	161,214	170,533
	1997	359,036	174,461	184,575
	1998	376,308	182,775	193,533
	1999	394,565	191,345	203,220
	2000	411,408	199,205	212,203
	2001	437,266	211,839	225,427
	2002	431,172	208,803	222,369
	2003	434,131	210,453	223,678
	2004	438,095	212,406	225,689
	2005	444,531	215,637	228,894
	2006	456,557	221,762	234,795
55 - 59	1980	310,995	145,603	165,392
	1985	281,585	132,889	148,696
	1990	252,174	120,175	131,999
	1995	243,035	116,491	126,544
	1996	248,445	119,247	129,198
	1997	258,444	124,059	134,385
	1998	275,482	132,476	143,006
	1999	293,440	141,003	152,437
	2000	310,002	148,841	161,161
	2001	325,492	156,205	169,287
	2002	351,475	168,863	182,612
	2003	363,413	174,457	188,956
	2004	376,168	180,566	195,602
	2005	390,249	187,578	202,671
	2006	409,860	197,324	212,536

**Table F-5 (continued). Population Counts and Estimates, Massachusetts: 1980, 1985, 1990, 1995-2006**

AGE GROUP	YEAR	TOTAL	MALE	FEMALE
60 -64	1980	277,384	126,323	151,061
	1985	269,645	123,966	145,679
	1990	261,905	121,609	140,296
	1995	225,426	105,979	119,447
	1996	221,450	104,381	117,069
	1997	220,318	104,206	116,112
	1998	220,073	104,333	115,740
	1999	228,893	108,256	120,637
	2000	236,405	111,504	124,901
	2001	244,247	115,421	128,826
	2002	252,593	119,505	133,088
	2003	267,914	126,808	141,106
	2004	278,207	131,924	146,283
	2005	286,382	135,834	150,548
	2006	295,355	139,927	155,428
65 - 69	1980	235,574	101,023	134,551
	1985	243,479	105,724	137,755
	1990	251,383	110,424	140,959
	1995	229,328	103,887	125,441
	1996	226,174	102,090	124,084
	1997	220,342	99,675	120,667
	1998	224,578	102,051	122,527
	1999	221,157	100,777	120,380
	2000	216,498	98,882	117,616
	2001	211,693	97,516	114,177
	2002	208,031	95,834	112,197
	2003	205,850	95,452	110,398
	2004	207,054	95,498	111,556
	2005	205,976	95,182	110,794
	2006	220,135	101,594	118,541
70 - 74	1980	187,041	73,235	113,806
	1985	197,186	79,388	117,798
	1990	207,331	85,541	121,790
	1995	211,201	89,345	121,856
	1996	210,014	88,742	121,272
	1997	209,512	89,113	120,399
	1998	217,425	93,318	124,107
	1999	214,991	92,667	122,324
	2000	211,332	91,416	119,916
	2001	206,665	89,544	117,121
	2002	201,885	87,724	114,161
	2003	196,641	85,632	111,009
	2004	189,518	83,049	106,469
	2005	185,271	81,493	103,778
	2006	189,546	84,203	105,343

**Table F-5 (continued). Population Counts and Estimates, Massachusetts: 1980, 1985, 1990, 1995-2006**

AGE GROUP	YEAR	TOTAL	MALE	FEMALE
75 - 79	1980	137,828	48,145	89,683
	1985	148,741	53,591	95,150
	1990	159,653	59,037	100,616
	1995	162,986	63,262	99,724
	1996	166,496	64,548	101,948
	1997	169,323	66,029	103,294
	1998	178,254	69,719	108,535
	1999	182,156	72,061	110,095
	2000	184,941	73,829	111,112
	2001	184,811	74,287	110,524
	2002	184,724	75,232	109,492
	2003	183,193	75,076	108,117
	2004	179,128	73,924	105,204
	2005	176,870	73,648	103,222
	2006	171,797	71,000	100,797
80 - 84	1980	92,180	28,513	63,667
	1985	99,240	30,991	68,249
	1990	106,299	33,468	72,831
	1995	112,913	37,919	74,994
	1996	114,039	38,664	75,375
	1997	114,787	39,273	75,514
	1998	121,228	41,932	79,296
	1999	126,467	44,435	82,032
	2000	130,699	46,464	84,235
	2001	134,896	48,601	86,295
	2002	136,865	49,486	87,379
	2003	138,872	50,760	88,112
	2004	142,585	52,695	89,890
	2005	143,488	53,423	90,065
	2006	137,462	50,896	86,566
85+	1980	73,908	20,107	53,801
	1985	82,124	21,006	61,118
	1990	90,339	21,905	68,434
	1995	108,970	27,600	81,370
	1996	111,703	28,439	83,264
	1997	114,258	29,558	84,700
	1998	120,501	31,447	89,054
	1999	119,093	31,435	87,658
	2000	116,692	30,948	85,744
	2001	121,247	33,490	87,757
	2002	125,466	35,910	89,556
	2003	131,264	38,236	93,028
	2004	135,410	40,625	94,785
	2005	141,930	43,786	98,144
	2006	137,022	40,108	96,914



**Table F-5. (continued) Population Counts and Estimates, Massachusetts: 1980, 1985-2006**

AGE GROUP	YEAR	TOTAL	MALE	FEMALE
TOTAL	1980	5,737,037	2,730,893	3,006,144
	1985	5,876,737	2,809,820	3,066,917
	1990	6,016,425	2,888,745	3,127,680
	1991	6,018,101	2,894,993	3,123,108
	1992	6,037,068	2,905,836	3,131,232
	1993	6,063,539	2,920,265	3,143,274
	1994	6,106,792	2,944,265	3,162,527
	1995	6,142,812	2,964,725	3,178,087
	1996	6,184,354	2,985,472	3,198,882
	1997	6,227,622	3,009,516	3,218,106
	1998	6,291,263	3,039,964	3,251,299
	1999	6,332,530	3,055,561	3,276,969
	2000	6,349,097	3,058,816	3,290,281
	2001	6,406,593	3,091,502	3,315,091
	2002	6,429,761	3,106,822	3,322,939
	2003	6,442,506	3,116,285	3,326,221
	2004	6,438,839	3,117,907	3,320,932
	2005	6,436,940	3,120,808	3,316,132
	2006	6,437,193	3,117,205	3,319,988



## APPENDICES





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# Massachusetts Birth Certificate

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The Commonwealth of Massachusetts  
DEPARTMENT OF PUBLIC HEALTH  
REGISTRY OF VITAL RECORDS AND STATISTICS  
STANDARD CERTIFICATE OF LIVE BIRTH

STATE USE O

1. RECORD NUMBER  768283		3C. CITY/TOWN		<p>The Commonwealth of Massachusetts DEPARTMENT OF PUBLIC HEALTH REGISTRY OF VITAL RECORDS AND STATISTICS STANDARD CERTIFICATE OF LIVE BIRTH</p>		3D. REGISTERED NU	
2. CERTIFICATE NUMBER (DPH USE ONLY)		3B. COUNTY					
3. FACILITY NUMBER		3A. FACILITY NAME-IF NOT IN FACILITY, NUMBER AND STREET					
4. NAME		4A. FIRST		4B. MIDDLE		4C. LAST	
5. SEX		6A. PLURALITY		6B. BIRTH ORDER		7. TIME	
8. DATE OF BIRTH (Month, Day, Year)							
9. NAME							
10. CERTIFIER TYPE							
11. NUMBER AND STREET						9H. ZIP CODE	
12. NAME		10A. FIRST				10B. SURNAME	
13. BIRTHPLACE		11A. CITY/TOWN		11B. STATE/COUNTRY		11C. DATE OF BIRTH (Month, Day, Year)	
14. RESIDENCE		12A. NUMBER AND STREET		12B. CITY/TOWN		12C. COUNTY	
14A. FIRST		14B. MIDDLE		14C. LAST			
15. BIRTHPLACE		13A. CITY/TOWN		13B. STATE/COUNTRY		13C. DATE OF BIRTH (Month, Day, Year)	
16. INITIALS		17A. I (WE) CERTIFY THAT THE PERSONAL INFORMATION APPEARING ABOVE IS TRUE AND CORRECT		17B. RELATIONSHIP TO CHILD			
17C. DATE SIGNED (Month, Day, Year)		17D. MAILING ADDRESS (If different from item # 13 above)		NUMBER AND STREET		CITY	
18. DATE OF RECORD (Month, Day, Year)		19. SUPPLEMENT FILED (Month, Day, Year)		20. CLERK/REGISTRAR			
21. DPH USE ONLY							



(INSTRUCTIONS ON REVERSE SIDE)

FOR USE BY

PHYSICIANS AND

## MEDICAL EXAMINERS



STANDARD CERTIFICATE OF DEATH

## REGISTRY OF VITAL RECORDS AND STATISTICS

STATE USE ONLY	
4c Hosp	
5 Type	
6 Hisp	Race
10 Age	
15 Resid	
15 Out-State	
23 Disp	
31-32	Autop
34 Manner	
35c Work Inj	
35f Place	
36-37 Cert	
40a Pron	

Pronouncement of Death  
Form (R-302) on File: ☐

PERMANENT  
BLACK INK ONLY

## DECEDENT

**INFORMANT****DISPOSITION**

## CERTIFIER

DECEDENT - NAME		FIRST	MIDDLE	LAST	REGISTERED NUMBER	SEX	DATE OF DEATH (Mo., Day, Yr.)
1 PLACE OF DEATH (City/Town):				2 COUNTY OF DEATH	3 HOSPITAL OR OTHER INSTITUTION - Name (If not in either, give street and number)		
4a PLACE OF DEATH (Check only one): HOSPITAL: <input type="checkbox"/> Inpatient <input type="checkbox"/> ER/Outpatient <input type="checkbox"/> OOA OTHER: <input type="checkbox"/> Nursing Home <input type="checkbox"/> Residence <input type="checkbox"/> Other (Specify)				6 SOCIAL SECURITY NUMBER		7 IF US WAR VETERAN, SPECIFY VA FILE NUMBER	
5 WAS DECEDENT OF HISPANIC ORIGIN? (If yes, Specify Puerto Rican, Dominican, Cuban, etc.) <input type="checkbox"/> NO <input type="checkbox"/> YES 8a Specify:				8b RACE (e.g. White, Black, American Indian, etc.) (Specify)		9 DECEDENT'S EDUCATION Elementary Sec (0-12) _____ College (1-4) _____	
10a AGE - Last Birthday (Yrs.)		10b UNDER 1 YEAR MOS. _____ DAY _____ HOURS _____ MINS _____		11 DATE OF BIRTH (Mo., Day, Yr.)		12 BIRTHPLACE (City and State or Foreign Country)	
10a MARRIED, NEVER MARRIED WIDOWED OR DIVORCED		13 LAST MARRIAGE (Give first name of spouse)		11 USUAL OCCUPATION (Prior - If Retired)		14 KIND OF BUSINESS OR INDUSTRY	
12 RESIDENCE - NO. & ST., CITY/TOWN, COUNTY, STATE/COUNTRY				15b ZIP CODE			
15a FATHER - FULL NAME				17 STATE OF BIRTH (If not U.S. name country)		18 MOTHER - NAME (GIVEN) (MAIDEN)	
16 INFORMANT'S NAME				19 MAILING ADDRESS - NO. & ST., CITY/TOWN, STATE, ZIP CODE			
20				21 RELATIONSHIP			
23 METHOD OF IMMEDIATE DISPOSITION <input type="checkbox"/> BURIAL <input type="checkbox"/> CREMATION <input type="checkbox"/> ENTOMBMENT <input type="checkbox"/> REMOVAL FROM STATE <input type="checkbox"/> DONATION <input type="checkbox"/> OTH. SPEC.				22 FUNERAL SERVICE LICENSEE OR OTHER DESIGNEE LICENSE # _____			
24 PLACE OF DISPOSITION (Name of Cemetery, Crematory or other)				25 LOCATION (City/Town, State)			
26a DATE OF DISPOSITION (Mo., Day, Yr.)				26b NAME AND ADDRESS OF FACILITY OR OTHER DESIGNEE			
27				28a/b			
29 PART I - Enter the diseases, injuries, or complications that caused the death. Do not use only the mode of dying, such as cardiac or respiratory arrest, shock or heart failure. List only one cause on each line (a through d) PRINT OR TYPE LEGIBLY.							
IMMEDIATE CAUSE (Final disease or condition resulting in death) → a. _____ DUE TO (OR AS A CONSEQUENCE OF) _____							
Sequentially list conditions, if any, leading to immediate cause. Enter UNDERLYING CAUSE (disease or injury that initiated events resulting in death) LAST b. _____ DUE TO (OR AS A CONSEQUENCE OF) _____							
c. _____ DUE TO (OR AS A CONSEQUENCE OF) _____							
d. _____							
PART II - Other significant conditions contributing to death but not resulting in underlying cause given in Part I.							
30 MED. EXAM. NOTIFIED? (Yes or No)							
31 WAS AUTOPSY PERFORMED? (Yes or No)							
32 WERE AUTOPSY AVAILABLE PRIOR TO COMPLETION OF DEATH? (Yes or No)							
33 34 MANNER OF DEATH <input type="checkbox"/> NATURAL <input type="checkbox"/> HOMICIDE <input type="checkbox"/> COULD NOT BE DETERMINE <input type="checkbox"/> ACCIDENT <input type="checkbox"/> SUICIDE <input type="checkbox"/> PENDING INVESTIGATION							
35 DATE OF INJURY (Mo., Day, Yr.)							
36 TIME OF INJURY							
37 INJURY AND ILLNESS (Yes or No)							
38 DESCRIBE HOW INJURY OCCURRED							
39 PLACE OF INJURY (At home, farm, street, factory, office building, etc.) Specify							
40 LOCATION (No. & St., City/Town, State)							
35d 36a To the best of my knowledge, death occurred at the time, date, and place and due to the cause(s) stated (Signature and Title)							
37a On the basis of examination and/or investigation in my opinion death occurred at the time, date, and place and due to the cause(s) stated. (Signature and Title)							
36b DATE SIGNED (Mo., Day, Yr.)							
37b DATE SIGNED (Mo., Day, Yr.)							
36c HOUR OF DEATH							
37c HOUR OF DEATH							
36d NAME OF ATTENDING PHYSICIAN IF NOT CERTIFIER							
37d PRONOUNCED DEAD (Mo., Day, Yr.)							
37e PRONOUNCED DEAD							
NAME AND ADDRESS OF CERTIFYING PHYSICIAN OR MEDICAL EXAMINER (Type or Print)							
37e LICENSE NO. OF CERTIFYING PHYSICIAN OR MEDICAL EXAMINER							
38 WAS THERE A PRONOUNCEMENT FORM? (Yes or No)							
39 IF YES, DATE PRONOUNCED							
40a IF YES, TIME PRONOUNCED							
40b NAME OF PRONOUNCER							
40c							
40d							
DATE BURIAL PERMIT ISSUED							
RECEIVED IN THE CITY/TOWN OF							
SIGNATURE-6D. OF HEALTH AGENT							
CLERK'S SIGNATURE							
DATE OF RECORD							





THE COMMONWEALTH OF MASSACHUSETTS  
DEPARTMENT OF PUBLIC HEALTH  
REGISTRY OF VITAL RECORDS AND STATISTICS  
**REPORT OF FETAL DEATH**

FORM R-304 8/05

DATE OF RECORD

STATE USE ONLY

FACILITY NUMBER	FACILITY NAME (IF NOT HOSPITAL, GIVE STREET AND NUMBER)			DATE OF DELIVERY (Month Day Year)	
	CITY/TOWN OF DELIVERY	COUNTY OF DELIVERY	TIME OF DELIVERY	PLACE OF DEATH	
<b>FETUS</b>				PLURALITY	BIRTH ORDER
	SEX	WEIGHT	WEEKS GESTATION AT DELIVERY DATE	DIED BEFORE LABOR / DURING LABOR OR DELIVERY	
<b>MOTHER</b>	CURRENT NAME FIRST		MIDDLE	LAST	
	MAIDEN SURNAME		DATE OF BIRTH	CITY AND STATE/COUNTRY OF BIRTH	
	RESIDENCE ADDRESS NUMBER AND STREET		CITY/TOWN	COUNTY	STATE
<b>FATHER</b>	CURRENT NAME FIRST		MIDDLE	LAST	
	DATE OF BIRTH		CITY AND STATE/COUNTRY OF BIRTH		
<b>CAUSE OF FETAL DEATH PART I</b>	ENTER ONLY ONE CAUSE PER LINE FOR (a), (b), and (c) SPECIFY FETAL OR MATERNAL				
	IMMEDIATE CAUSE	(a)			
	DUE TO OR AS A CONSEQUENCE OF	(b)			
	DUE TO OR AS A CONSEQUENCE OF	(c)			
<b>PART II</b>	OTHER SIGNIFICANT CONDITIONS OF THE FETUS OR THE MOTHER				
	WAS THE CASE REFERRED TO A MEDICAL EXAMINER?		WAS AN AUTOPSY PERFORMED?		WERE AUTOPSY FINDINGS AVAILABLE PRIOR TO THE COMPLETION OF CAUSE OF DEATH?
	DATE OF INJURY (MATERNAL)	TIME OF INJURY	INJURY AT WORK		PLACE OF INJURY
	DESCRIBE HOW INJURY OCCURRED		LOCATION OF INJURY		
<b>CERTIFIER</b>	I HEREBY CERTIFY that this delivery occurred on the date stated and the product of conception was not a live birth.				
	Signature of Certifying Physician or Medical Examiner				TITLE
<b>ATTENDANT (if different)</b>	Type or Print - Name of Certifying Physician or Medical Examiner				LICENSE #
	STREET ADDRESS CITY/TOWN STATE ZIP CODE				
<b>DISPOSITION</b>	NAME OF PHYSICIAN OR ATTENDANT/ TITLE				LICENSE #
	METHOD	PLACE OF DISPOSITION (Name of Cemetery, Crematory, or other facility)			LOCATION (City or Town and State)
	FUNERAL SERVICE LICENSEE (if any)				LICENSE #
	NAME OF FACILITY (if any)				DATE OF DISPOSITION
<b>PERMIT</b>	DATE PERMIT ISSUED		CITY/TOWN ISSUING	ISSUED BY (signature of Health Agent):	

INSTRUCTIONS: Complete a Report of Fetal Death only for fetal deaths of twenty weeks or more gestation OR of a weight of 350 grams or more. Complete front and reverse sides of form within 10 days and send original copy to:

Registry of Vital Records and Statistics/ Natality Data Unit - FD,  
150 Mt. Vernon Street, 1<sup>st</sup> Floor, Dorchester, MA 02125

When forwarding for disposition permit: Do not send the original report to the local Board of Health. Photocopy and forward only the FRONT of this form. The original report must be sent to the Department of Public Health at the address listed above.



The Commonwealth of Massachusetts  
DEPARTMENT OF PUBLIC HEALTH  
REGISTRY OF VITAL RECORDS AND STATISTICS  
**CERTIFICATE OF MARRIAGE**

(State file number)

(City or town making return)

Registered No. \_\_\_\_\_

Intention No. \_\_\_\_\_

**THIS CERTIFICATE IS  
NOT TO BE USED  
OUTSIDE OF  
MASSACHUSETTS.**

**NOT VALID AFTER:**

THIS IS A PERMANENT RECORD.  
Use only permanent black ink or  
approved black typewriter ribbon. Every  
item of information must be carefully  
supplied. ALTERATIONS AND ERA-  
SURES IN THIS CERTIFICATE ARE  
FORBIDDEN; PENALTY FOR VIOLA-  
TION, ONE HUNDRED DOLLARS.

MGL c 207, §§ 28, 28A, 48, 49, 54, 57  
and c 46, § 18.

☐ COMMISSION  
ON FILE

S  
O  
L  
E  
M  
N  
I  
Z  
E  
R

1 Place of Marriage \_\_\_\_\_

City or Town \_\_\_\_\_

(Do not enter name of village or section of city or town)

2 Date of Marriage \_\_\_\_\_

(Month)

(Day)

(Year)

3 FULL NAME PARTY A \_\_\_\_\_

11 FULL NAME PARTY B \_\_\_\_\_

3A SURNAME  
AFTER MARRIAGE \_\_\_\_\_11A SURNAME  
AFTER MARRIAGE \_\_\_\_\_

4 DATE OF BIRTH \_\_\_\_\_

5 OCCUPATION \_\_\_\_\_

12 DATE OF BIRTH \_\_\_\_\_

13 OCCUPATION \_\_\_\_\_

6 RESIDENCE  
NO. & ST. \_\_\_\_\_  
CITY/  
TOWN \_\_\_\_\_

ST. \_\_\_\_\_

ZIP  
CODE \_\_\_\_\_14 RESIDENCE  
NO. & ST. \_\_\_\_\_  
CITY/  
TOWN \_\_\_\_\_

ST. \_\_\_\_\_

ZIP  
CODE \_\_\_\_\_7 NUMBER OF  
MARRIAGE  
(1st, 2nd, 3rd, etc.) \_\_\_\_\_7A WIDOWED  
OR DIVORCED \_\_\_\_\_15 NUMBER OF  
MARRIAGE  
(1st, 2nd, 3rd, etc.) \_\_\_\_\_15A WIDOWED  
OR DIVORCED \_\_\_\_\_

8 BIRTHPLACE \_\_\_\_\_

(City or town)

(State or country)

16 BIRTHPLACE \_\_\_\_\_

(City or town)

(State or country)

9 NAME OF  
MOTHER/PARENT \_\_\_\_\_17 NAME OF  
MOTHER/PARENT \_\_\_\_\_10 NAME OF  
FATHER/PARENT \_\_\_\_\_18 NAME OF  
FATHER/PARENT \_\_\_\_\_

19 THE INTENTION OF MARRIAGE by the above-mentioned persons was duly entered by me in the records of the Com-  
munity according to law, this \_\_\_\_\_ day of \_\_\_\_\_

☐ COURT WAIVER Issued \_\_\_\_\_

(Name of Community)

☐ AGE ORDER \_\_\_\_\_

(Month)

(Day)

(Year)

(City or Town Clerk or Registrar)

20 I HEREBY CERTIFY that I solemnized the marriage of the above-named persons at No. \_\_\_\_\_  
(If marriage was solemnized in a church, give its NAME instead of street and number)

(Name of city or town)

on \_\_\_\_\_

(Month)

(Day)

(Year)

Signature \_\_\_\_\_

(Member of the Clergy, Priest, Rabbi, Imam, or Justice of the Peace, etc.)

(Print or type name)

Address \_\_\_\_\_

21 Certificate recorded by city or town clerk \_\_\_\_\_

(Month)

(Day)

(Year)

CLERK OR REGISTRAR

22 PARTY A SEX: ☐ MALE ☐ FEMALE23 PARTY B SEX: ☐ MALE ☐ FEMALE

The Commonwealth of Massachusetts  
DEPARTMENT OF PUBLIC HEALTH  
REGISTRY OF VITAL RECORDS AND STATISTICS  
CERTIFICATE OF ABSOLUTE  
DIVORCE OR ANNULMENT  
(Chap. 208, Sec. 46 G.L.)  
R-408

HUSBAND - NAME		FIRST	MIDDLE	LAST
USUAL RESIDENCE - STREET ADDRESS			CITY, TOWN OR LOCATION	
2a. COUNTY		2b. DATE OF BIRTH (Mo., Day, Yr.)		NUMBER OF THIS MARRIAGE (1st, 2nd, Specify)
2c. STATE		3. WIFE NAME		4. MAIDEN NAME
5a. USUAL RESIDENCE - STREET ADDRESS		5b. CITY, TOWN OR LOCATION		
6a. COUNTY		6b. DATE OF BIRTH (Mo., Day, Yr.)		NUMBER OF THIS MARRIAGE (1st, 2nd, Specify)
6c. STATE		7. DATE OF THIS MARRIAGE (Mo., Day, Yr.)		8. NUMBER OF CHILDREN BORN ALIVE OF THIS MARRIAGE
9. DATE OF THIS MARRIAGE (Mo., Day, Yr.)		10a. NUMBER OF CHILDREN UNDER AGE 18 IN THIS FAMILY		10b.

FOR COURT USE ONLY			
11. COUNTY OF JUDGMENT		11a. TITLE OF COURT	
12. DATE OF JUDGMENT NISI (Mo., Day, Yr.)		13. TYPE OF JUDGMENT - DIVORCE OR ANNULMENT (Specify)	
14. DATE OF JUDGMENT ABSOLUTE (Mo., Day, Yr.)		15. DOCKET NUMBER	
16. NAME OF PLAINTIFF		17. CAUSE FOR WHICH GRANTED	
18a. SIGNATURE OF CERTIFYING OFFICIAL		18b. TITLE OF OFFICIAL	







